

# Fishes of the Moreton Bay Marine Park and adjacent continental shelf waters, Queensland, Australia

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## ABSTRACT

The fish fauna of Moreton Bay Marine Park and adjacent continental shelf waters up to 200 m depth is shown to comprise at least 1,190 species. Fishes were mainly identified from specimens collected and lodged in the Queensland Museum, but records were also compiled from underwater photographs and visual surveys. Species are separately listed for five locally significant areas in the region: coastal Moreton Bay, Flinders Reef, Flat Rock, Southport Seaway, and offshore in 40–200 m depth. Overall abundance levels are provided for each species, and species at the known northern or southern limit of their continental eastern Australian distribution are indicated. Almost one-third of the fauna reaches the extremity of its known latitudinal range in the area, with 64 species (5.4%) at their northern range limit and 310 (26.1%) at their southern range limit. Three new Australian records, four new records for the east coast of Australia, and three undescribed species known only from the area are listed. Additional information is given on some rare and limital species, and species of uncertain taxonomy. □ Moreton Bay, Queensland, Flinders Reef, Flat Rock, Southport, fish, checklist, distribution, biogeography

The Moreton Bay Marine Park (MBMP) was first declared in 1993, in recognition of the significance of its biodiversity and the social, cultural, environmental, fisheries and conservation value of the area. The park covers almost 350,000 hectares and stretches about 125 km along the mainland between Caloundra and Southport. The offshore boundary is generally about three nautical miles east of Moreton and Stradbroke Islands. The fish fauna of the area has long been exploited by commercial and recreational fishers, and until recently efforts to document species diversity were mainly directed at these elements of the fauna and its bycatch. Johnson (1999) produced an annotated checklist of fishes from the coastal area inside Moreton and Stradbroke Islands, however information on fishes of the portion of the marine park outside the sheltered waters of Moreton Bay remained sparse. This paper is intended to provide a detailed inventory of fishes from the entire MBMP and adjacent continental

shelf waters recorded to date, and to indicate separately the composition of fish communities at five locally significant areas within the region.

## COASTAL MORETON BAY

Coastal Moreton Bay is modified from the area of Moreton Bay treated by Johnson (1999), mainly to include the area of the MBMP from Comboyuro Point north to Cape Moreton and west to Caloundra Head, including Pumicestone Passage (Fig. 1). The new area at the north mostly includes broad expanses of fine sandy substrates in depths up to 28 m, however Caloundra Head is a prominent rocky headland with a rock platform that is exposed to ocean swells and significant wave action. Southport Seaway is here excluded from the area defined as coastal Moreton Bay, as its fauna is listed separately in this study. Coastal Moreton Bay has a few limited holes and channels with maximum depths of up to about 30 m, but predominantly comprises depths of less than 20 m. Habitat descriptions

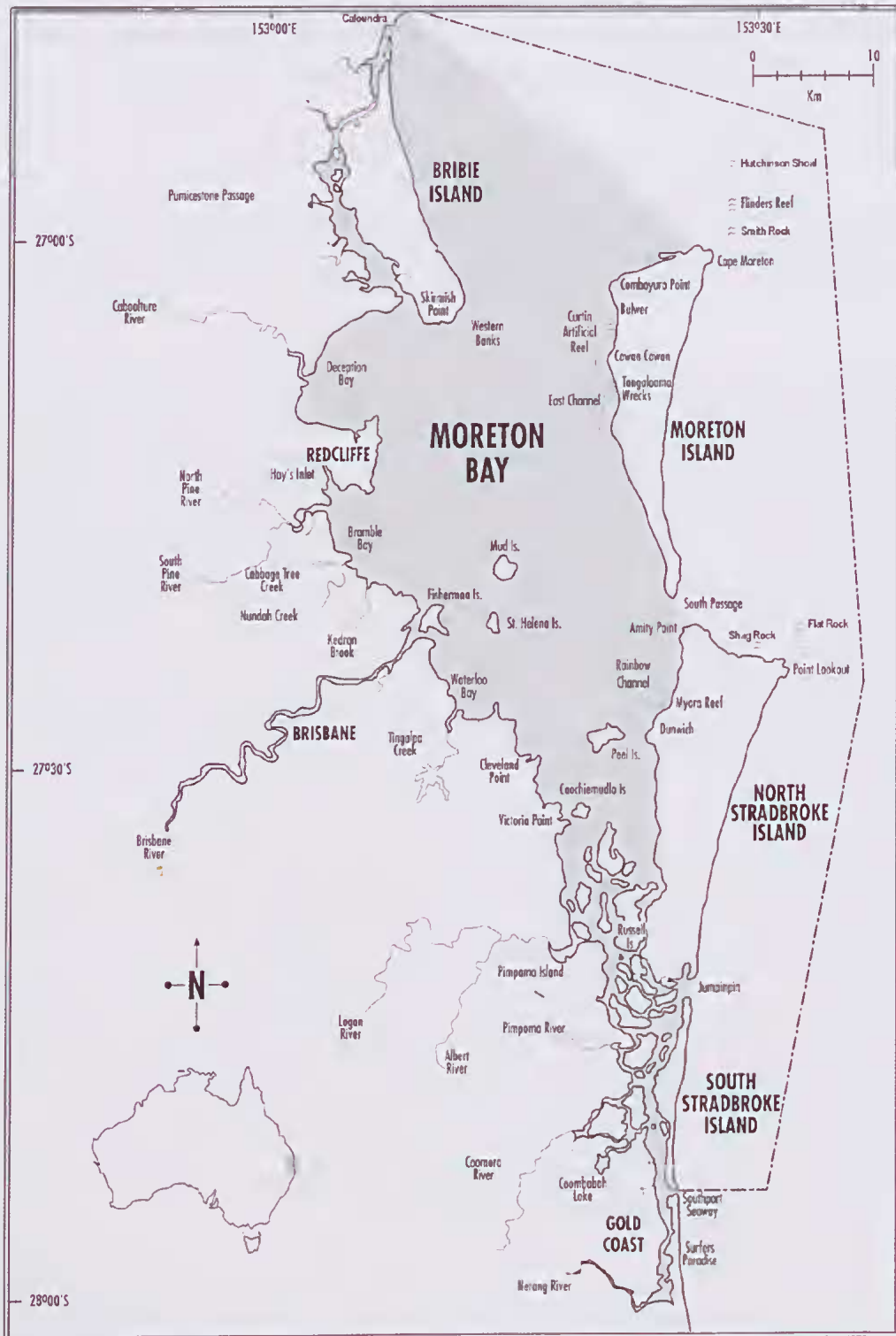


FIG. 1. Moreton Bay Marine Park and adjacent continental shelf waters (marine park boundary is delineated by the broken line; shaded area is defined as coastal Moreton Bay; 200 m depth contour approximately follows the right hand border of the map).



and other background information on Moreton Bay were detailed in Johnson (1999).

### FLINDERS REEF

Flinders Reef and the adjacent reefs off Cape Moreton, including Hutchinson Shoal and Smith Rock (Figs 1, 2), were surveyed to a depth of 30 m. These reefs are largely composed of rocky outcrops, the most significant of which is partially exposed at all stages of the tide. The more sheltered north-western side of Flinders Reef, in depths of about 5–12 m, has well established coral communities that support many fish species infrequently found in other areas of the MBMP. The northern end has numerous large boulders, caves, underhangs and fissures between large rocky plates. Hutchinson Shoal has a small pinnacle rising to a depth of 6 m, but consists most notably of a north-south aligned ridge with

variously inclined sides that fall away steeply to about 35 m. There are some vertical walls, overhangs, and large caves near the foot of the reef, some of which contain large growths of gorgonians. A wide variety of pelagic fishes congregate around these features. Smith Rock is similar to the south-eastern end of Flinders Reef. Both have undulating shallow rocky bottom and are heavily exposed to ocean swells and current.

### FLAT ROCK

Flat Rock and adjacent reefs, including Shag Rock, Boat Rock, Middle Reef and Manta Ray Bommie, as well as the rocky headlands of Point Lookout (Figs 1, 3A–C) were surveyed to depths of 30 m. Most reefs in this area (Flat, Boat and Shag) are partially exposed at all stages of the tide. There are some stands of hard corals throughout the area, especially on the

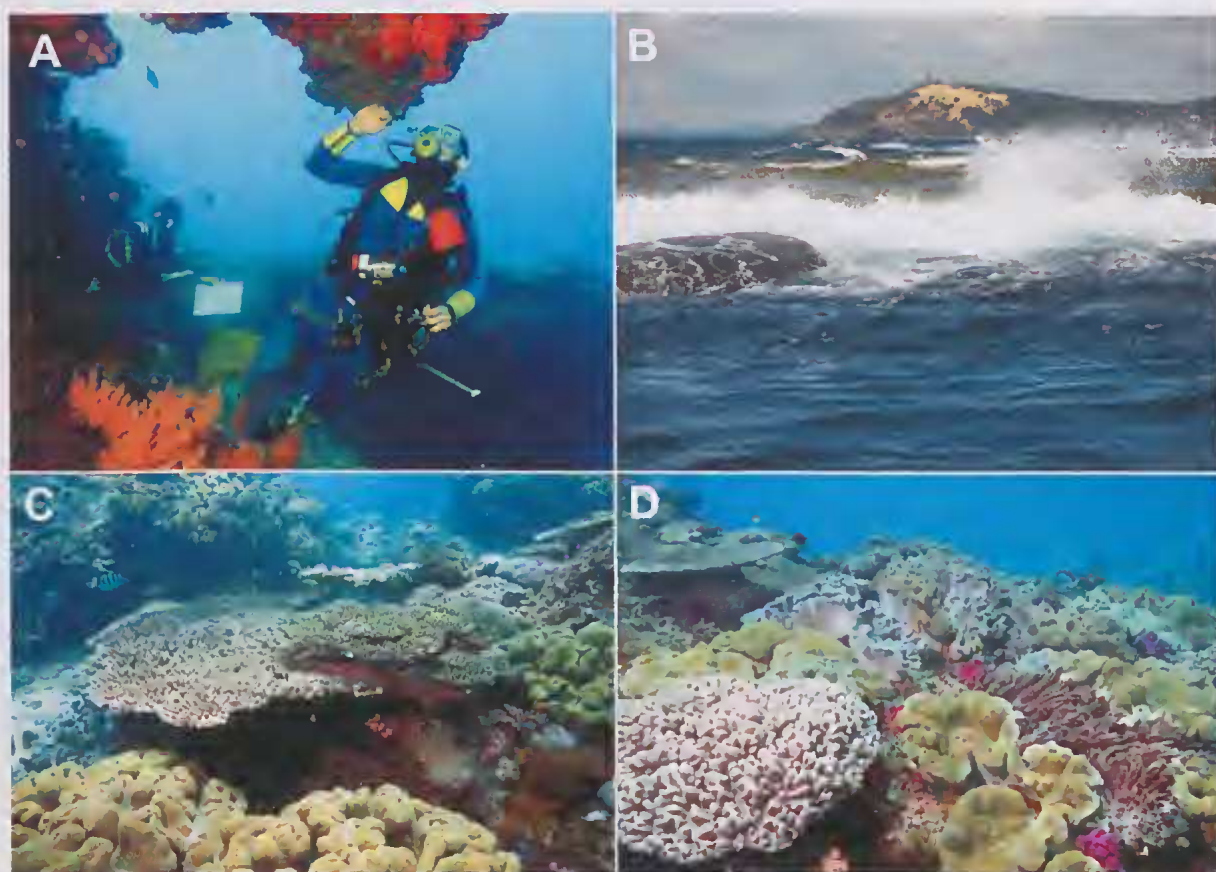


FIG. 2. A. Photographing and visually recording fishes at the base of Hutchinson Shoal at a depth of 28 m. B. Crest of Flinders Reef, showing tidal rock pools, with Cape Moreton in the background. C. Hard and soft corals among rock ledges at the northwest edge of Flinders Reef. D. Soft coral and red algae at the northern end of Flinders Reef. Photos: A, C, D by I. Banks; B by J. Wright.

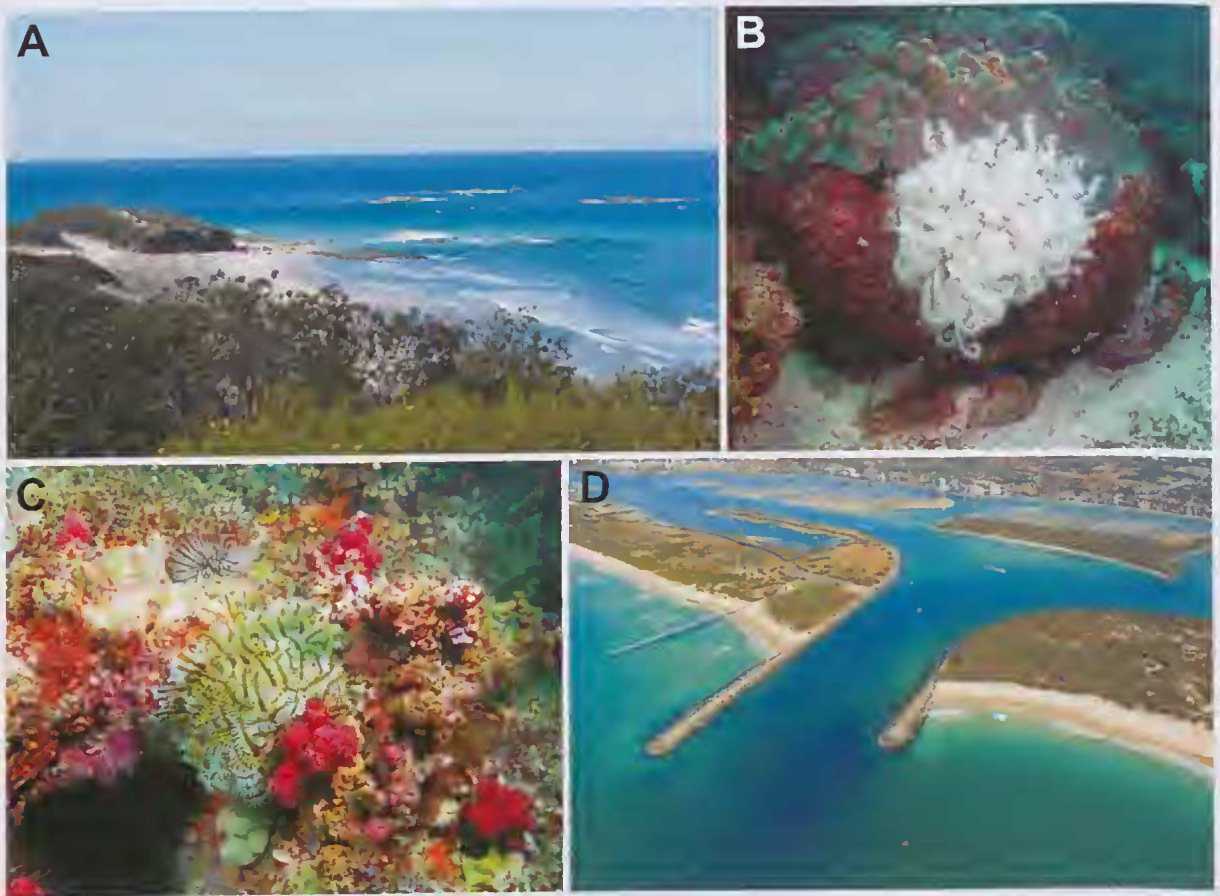


FIG. 3. A. View north from headland near Point Lookout, over exposed rocky outcrops comprising Manta Ray Bommie, with Flat Rock further out to sea in the centre left. B. Large boulders with hard coral and crinoids, off the southeast end of Flat Rock. C. Reef encrusted with various crinoids, soft corals and algae near the southern end of Flat Rock. D. Aerial view of Southport Seaway, with Wavebreak Island in the right hand background. Photos: A by C. Wallace; B-D by I. Banks.

leeward side of Flat Rock, but the predominant habitat consists of large rock formations with some soft corals and a profusion of hydroids and other encrusting invertebrate and algal growth. Flat Rock features a series of steep gutters, a gradual dropoff, and several stepped rocky platforms. It is exposed to heavy surf and strong currents depending on wind, swell and tidal conditions. Boat Rock is most notable for its vertical rock faces that extend from the seafloor in about 27 m to just above the surface. Manta Ray Bommie has a number of large isolated rocky outcrops in a sandy channel subject to moderate to strong currents. Shag Rock is a large rocky outcrop partially split by a narrow wedge-shaped channel. It is largely sheltered from the prevailing south-east winds and swell

that affect other reefs in the area. Crinoids are particularly common around Shag Rock. The various rocky headlands of Point Lookout are proximal to the offshore reefs, especially to Manta Ray Bommie. Also surveyed for this area were rock pools at the bottom of the tidal plane and non-enclosed rock faces at the foot of several of the headlands of Point Lookout.

#### SOUTHPORT SEAWAY

The Southport Seaway was surveyed between the eastern entrance and the eastern side of Wavebreak Island (Figs 1, 3D). This area mainly consists of current swept clean sandy substrate to a maximum depth of 20 m, bordered by steep rock walls constructed of large boulders. There are some relatively sparse seagrass beds in the



western portion. The area also features several extensive submerged pipelines (Fig. 8B) which consistently attract large aggregations of fishes. While much of the habit in the seaway is comprised of man-made structures, the area was included separately as a site for this study as it supports very significant fish communities, elements of which are rarely found elsewhere in the region, e.g. aggregations of Whitespotted Guitarfish (*Rhynchobatus laevis*), whiprays (*Himantura fai* and *H. uaruak*), ghost pipefishes (*Solenostomus cyanopterus* and *S. paradoxus*) pipefish (*Stigmatopora uigra* and *Trachyrhynchus bicoarctatus*), High-crown Seahorse (*Hippocampus procerus*) and Queensland Groper (*Epinephelus lauceolatus*).

#### OFFSHORE WATERS

Offshore waters are categorised here as the open sea to the east of Caloundra and the major Moreton Bay Islands, in depths of 40–200 m (Fig. 1). While this area mostly consists of sandy or silty bottom able to be sampled by demersal trawls, there are also significant areas of low relief rocky reef and shoals composed of rubble and shell. Some of these reefs and shoals are known to support well developed stands of gorgonians, bryzoans and macroalgae, including kelp, *Ecklonia radiata*, in some very limited areas. The reefal zones are scattered, but variously occur throughout this depth range. The soft bottom areas are trawled for the Eastern King Prawn (*Penaeus plebejus*) fishery, while the reefal areas are subject to commercial and recreational line fisheries, especially for Snapper (*Pagrus auratus*) and Pearl Perch (*Glaucosoma scapulare*).

#### MATERIALS AND METHODS

The fishes listed are those recorded from Caloundra Head (26°48'S), east to the 200 m depth contour, and south to the Southport Seaway (27°57'S) (Fig. 1). This region encompasses the Moreton Bay Marine Park (MBMP), but is expanded slightly in that it extends due east from Caloundra Head (rather than obliquely southeast), extends to the south bank of the Southport Seaway (instead of the north bank) and uses the 200 m depth contour as the eastern boundary (instead of a line variably approximating three nautical miles east of Moreton and Stradbroke Islands). Maximum depth within the MBMP is about 110 m in a limited area

northeast of Cape Moreton. The 200 m depth contour was substituted as the eastern boundary for this study to produce greater consistency of results, and due to difficulties in directing and effectively limiting appropriate sampling efforts to within the MBMP boundary. The diversity of fishes from depths in excess of 40 m was largely determined by trawling carried out by third parties whose objectives were to determine catch composition in a broader area than that of the MBMP. Consequently, there was limited opportunity to collect detailed information in deeper areas of the MBMP, and restricting this study to that area was deemed impractical. Information gathered using a fixed maximum depth determinant coinciding with the edge of the continental shelf was also considered to be more biogeographically informative than data determined by an arbitrary distance-from-shore limitation, as the latter encompassed a wide variation of maximum depths from north to south. Despite the difference in depth profiles between the study area and the actual MBMP, it is envisaged that the fishes listed here are also an accurate representation of those likely to be found in the MBMP. The results of trawling throughout this area (Qld Dept. of Primary Industries & Fisheries, unpublished data; this study) indicate most species that were sampled in depths of 110–200 m also occurred at least as stragglers in depths of 40–110 m.

The basis of all records is individually identified. Where species were recorded by multiple means, it is indicated only once and according to the following order of priority: voucher specimen (S), photograph (P), visual (V), or literature (L). Most records are based on specimens held in the collection of the Queensland Museum, however several are from specimens in the Australian Museum (Sydney), or the Australian National Fish Collection (CSIRO Marine Research, Hobart). Methods of sampling, acquiring specimens and validating museum specimens were similar to that outlined in Johnson (1999). Demersal trawl samples from the 40–200 m depth range were obtained from both commercial catches and research trawls, but most were sourced from Qld Dept. of Primary Industries and Fisheries Eastern King Prawn, Bycatch Reduction and Long Term Monitoring Program surveys from 2001–2010. Photographs of trawled

specimens were also accessed from fisheries surveys in the area, and in many cases the photographed specimen was also lodged at QM. Handlining with baited hooks and multi-hooked jigs of various sizes was used to sample pelagic fishes in open water and demersal fishes on reef habitats in depths of 40–120 m. Larval fishes were not sampled as part of this study and do not form the basis of any of the records. Collectors of species that constitute additional records to this list are encouraged to lodge voucher specimens in the collection of the Queensland Museum.

In the coastal and reef areas up to depths of 30 m (areas 1–4, Table 1) numerous scuba dives were undertaken for underwater visual surveys, photography, and collection by hand net, spear and ichthyocide. For underwater visual surveys, fish species were identified and recorded solely by the author, using visual census techniques modified from Hutchins (2001). Sheets of waterproof paper printed with pre-prepared lists of the most common fish species known from the area were mounted on a clipboard. Swimming transects of approximately 45 minutes were conducted throughout various prospective habitats at each dive site, all species were recorded, and their abundance noted. Numbers and additional species were updated during the dive as additional fishes were observed. On many dives a second diver photographed as many species as possible along the same transect (Fig. 2A) and these images were later identified in the laboratory and used to help confirm species identifications and abundance levels. Many additional underwater photographs, taken by Ian Banks (*Diving the Gold Coast*), were also used to validate records. These images were all supplied with detailed date and locality descriptions. Footage from baited underwater video taken near Flinders Reef, Henderson Rock and Flat Rock during 2008–09 by CSIRO Marine Research was examined by the author. This provided further confirmation of a number of species previously classified in this study as rare, however only one species was recorded solely by this method.

Relative abundance presented in the table of results was based on a combination of indicators, including numbers of specimen lots in the QM collection, frequency a species was collected

or observed in the field by the author, frequency a species was recorded in trawl samples, and number of times a species was photographed underwater. It is presented according to the following criteria: rare—1 to 4 records; uncommon—5 to 10 records; common—11 to 100 records; and abundant—more than 100 records. In general, an observation of a shoal of schooling fish was regarded as a single rather than multiple record of the species, so as to avoid overstating the abundance of species based on one-off sightings of shoals.

The Australian distribution of species in the list was generally sourced from Hoese *et al.* (2006), except where more recent revisions were available, or where validated QM records indicated a more expansive range. Where species recorded herein are at the northern or southern limit of their known range throughout the continental east coast of Australia, they are indicated in the range column of Table 1 as 'North' or 'South' respectively. Species known from Western Australia, but not previously recorded from the east coast are indicated by 'East'. New records for Australia are indicated by 'NAR'. Where no indication of range is given, MBMP falls wholly within the broader known range of the species. In the notes column, symbols indicate whether photographs of species taken in the MBMP are reproduced as figures, or other information is provided in endnotes (eg museum registration numbers for species regarded as rare, undescribed or indeterminate, and for specimens representing extensions of previously known range).

The checklist follows the classification of Hoese *et al.* (2006).

## RESULTS

The fish fauna of five areas of the MBMP and adjacent continental shelf waters up to 200 m depth (Fig. 1) is listed in Table 1. A total of 1,190 species is recorded, mainly from specimens collected. Of the 167 species where no voucher specimen is held, 122 are recorded primarily from photographs identified by the author, 39 are from the author's underwater visual observations, and six are based solely on reports in the literature that were deemed reliable (references for the latter are provided in the endnotes). 753 species are recorded from coastal



Checklist of Moreton Bay Fishes

Moreton Bay, 477 from Flinders Reef area, 420 from Flat Rock area, 404 from Southport Seaway, and 297 from the offshore zone in 40–200 m depth. Almost a third of the fauna reaches the extremity of its latitudinal range in the area.

Sixty-four species (5.4%) are at their northern range limit and 310 (26.1%) are at their southern range limit in MBMP. There are three new Australian records and four new records for the east coast of Australia.

**Table 1.** Fishes of the Moreton Bay Marine Park. Abbreviations: 1 = coastal Moreton Bay; 2 = Flinders Reef and adjacent reefs off Cape Moreton; 3 = Flat Rock, adjacent reefs and rocky headlands off Point Lookout; 4 = Southport Seaway; 5 = Offshore (40–200 m depth). Abund. = abundance; S = voucher specimen/s in QM; P = photograph; P in 'Note' column indicates a photograph reproduced in Figs 4–9); V = visual record; L = literature record. Abundance: A = abundant, C = common, U = uncommon, R = rare. 'North' or 'South' in the Range column indicates a species is at the northern or southern limit of their known range along eastern Australia. Species known from Western Australia, but not previously recorded from the east coast are indicated by 'East'. New records for Australia are indicated by 'NAR'. Numbers in 'Notes' column refer to endnotes following the table.

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<b>Chimaeridae</b>								
<i>Hydrolagus lemures</i> (Whitley, 1939)					S	C		
<i>Hydrolagus marmoratus</i> Didier, 2008					S	U		1
<b>Heterodontidae</b>								
<i>Heterodontus galeatus</i> (Günther, 1870)					S	U	North	2
<b>Odontaspidae</b>								
<i>Carcharias taurus</i> Rafinesque, 1810	S	P	P			U		
<b>Alopiidae</b>								
<i>Alopias vulpinus</i> (Bonnaterre, 1788)	L				L	R		3
<b>Lamnidae</b>								
<i>Carcharodon carcharias</i> (Linnaeus, 1758)	S		P		V	U		
<i>Isurus oxyrinchus</i> Rafinesque, 1810	S		P			U		
<i>Isurus paucus</i> Guitart Manday, 1966			P			R	North	4
<b>Scyliorhinidae</b>								
<i>Asymbolus analis</i> (Ogilby, 1885)					S	U		5
<i>Asymbolus rubiginosus</i> Last, Gomon & Gledhill, 1999					S	U	North	
<i>Figaro boardmani</i> (Whitley, 1928)					S	U	North	6
<b>Triakidae</b>								
<i>Mustelus walkeri</i> White & Last, 2008	S				S	C	South	7
<b>Hemigaleidae</b>								
<i>Hemigaleus australiensis</i> White, Last & Compagno, 2005	S				P	C		8
<i>Hemipristis elongata</i> (Klunzinger, 1871)	S					R	South	9
<b>Carcharhinidae</b>								
<i>Carcharhinus amboinensis</i> (Müller & Henle, 1839)	S					C	South	10
<i>Carcharhinus brachyurus</i> (Günther, 1870)	S					R	North	11
<i>Carcharhinus brevipinna</i> (Müller & Henle, 1839)	S			S		C		
<i>Carcharhinus cautus</i> (Whitley, 1945)	S					U		
<i>Carcharhinus leucas</i> (Valenciennes, 1839)	S			P		C		
<i>Carcharhinus limbatus</i> (Valenciennes, 1839)	S					C		
<i>Carcharhinus obscurus</i> (Lesueur, 1818)	S	V				C		
<i>Carcharhinus plumbeus</i> (Nardo, 1827)	S			P		C		

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Carcharhinus sorrah</i> (Valenciennes, 1839)	S					A	South	12
<i>Galeocerdo cuvier</i> (Péron & Lesueur, 1822)	S	V	V			C		
<i>Loxodon macrorhinus</i> Müller & Henle, 1839	S					R	South	13
<i>Negaprion acutidens</i> (Rüppell, 1837)	S			S		U	South	
<i>Rhizoprionodon acutus</i> (Rüppell, 1837)	S					C	South	14
<i>Rhizoprionodon taylori</i> (Ogilby, 1915)	S					U	South	15
<i>Triaenodon obesus</i> (Rüppell, 1837)			V			R	South	16
<b>Sphyrnidae</b>								
<i>Sphyrna lewini</i> (Griffith & Smith, 1834)	S	S			S	C		
<i>Sphyrna mokarran</i> (Rüppell, 1837)	P					U		
<b>Parascylliidae</b>								
<i>Parascyllium collare</i> Ramsay & Ogilby, 1888					S	U	North	
<b>Brachaeluridae</b>								
<i>Brachaelurus colcloughii</i> Ogilby, 1908	S				P	U		
<i>Brachaelurus waddi</i> Bloch & Schneider, 1801	S		S			U		
<b>Orectolobidae</b>								
<i>Orectolobus halei</i> Whitley, 1940		P	V	S		U	North	
<i>Orectolobus maculatus</i> (Bonnaterre, 1788)	S	V	P	S	S	C		
<i>Orectolobus ornatus</i> (De Vis, 1883)	S	S	V	S		C		
<b>Hemiscylliidae</b>								
<i>Chiloscyllium punctatum</i> Müller & Henle, 1838	S	V	V	P		A		
<b>Stegostomatidae</b>								
<i>Stegostoma fasciatum</i> (Hermann, 1783)	S	V	V	P		C		
<b>Rhincodontidae</b>								
<i>Rhincodon typus</i> (Smith, 1828)			P		P	R		
<b>Hexanchidae</b>								
<i>Hexanchus nakamurai</i> Teng, 1962					S	R		
<b>Squalidae</b>								
<i>Squalus grahami</i> White, Last & Stevens, 2007					S	C		
<i>Squalus megalops</i> (Macleay, 1881)					S	C		
<b>Squatinae</b>								
<i>Squatina albipunctata</i> Last & White, 2008					S	U		
<b>Torpedinidae</b>								
<i>Hypnos monopterygium</i> (Shaw & Nodder, 1795)	S	P			S	C		
<b>Pristidae</b>								
<i>Pristis zijsron</i> Bleeker, 1851	S					R		17
<b>Rhinidae</b>								
<i>Rhina ancylostoma</i> Bloch & Schneider, 1801	S	V				U		
<i>Rhynchobatus laevis</i> (Bloch & Schneider, 1801)	S	V	V	P		C		P; 18
<b>Rhinobatidae</b>								
<i>Aptychotrema rostrata</i> (Shaw & Nodder, 1794)	S			S	S	C		
<i>Rhinobatos typus</i> Bennett, 1830	S					C		
<i>Trygonorrhina fasciata</i> (Müller & Henle, 1841)					S	U	North	



## Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<b>Rajidae</b>								
<i>Dipturus australis</i> (Macleay, 1884)					S	U		
<i>Dipturus endeavouri</i> Last, 2008					S	C		
<b>Dasyatidae</b>								
<i>Dasyatis fluviatorum</i> Ogilby, 1908	S			P		C		
<i>Dasyatis thietidis</i> Ogilby, 1899					S	R	North	19
<i>Himantura astra</i> Last, Manjaji-Matsumoto & Pogonoski, 2008	S					U	South	
<i>Himantura fai</i> Jordan & Seale, 1906	P		P	P		C	South	20
<i>Himantura toshi</i> Whitley, 1939	S					U		
<i>Himantura uarnak</i> (Forsskål, 1775)	S			P		C		
<i>Neotrygon kulilii</i> (Müller & Henle, 1841)	S	P	V	P	S	A		
<i>Pastinaculus atrus</i> (Macleay, 1883)	S			P		U		21
<i>Taeniura meyeri</i> Müller & Henle, 1841	V		V	P		U		
<b>Urolophidae</b>								
<i>Trygonoptera testacea</i> (Müller & Henle, 1841)	S		V	P	S	C		
<i>Urolopius kapalensis</i> Yearsley & Last, 2006					S	R	North	
<i>Urolopius sufflavus</i> Whitley, 1929					S	R	North	
<b>Gymnuridae</b>								
<i>Gymnura australis</i> (Ramsay & Ogilby, 1886)	S			P		C		
<b>Myliobatidae</b>								
<i>Actobatus ocellatus</i> (Kuhl, 1823)	S	P	V	P		A		22
<i>Manta alfredi</i> (Kreff, 1868)	V		P			C		23
<i>Mobula japonica</i> (Müller & Henle, 1841)			S	P		U		
<i>Mobula eregoodootenkee</i> (Cuvier, 1829)	S					R		
<i>Myliobatis australis</i> Macleay, 1881	L					R	North	24
<i>Myliobatis hamlyni</i> Ogilby, 1911	S				S	R	South	25
<i>Rhinoptera neglecta</i> Ogilby, 1912	S			P		C		P
<b>Elopidae</b>								
<i>Elops hawaiiensis</i> Regan, 1909	S					U		
<b>Megalopidae</b>								
<i>Megalops cyprinoides</i> (Broussonet, 1782)	S			P		C		
<b>Albulidae</b>								
<i>Albula oligolepis</i> Hidaka, Iwatsuki & Randall, 2008	S	S	S	S		C		26
<b>Anguillidae</b>								
<i>Anguilla australis</i> Richardson, 1841	S					C		
<i>Anguilla reinhardtii</i> Steindachner, 1867	S					C		
<b>Muraenidae</b>								
<i>Anarchias seychellensis</i> Smith, 1962		S	S			U	South	27
<i>Echidna nebulosa</i> (Ahl, 1789)	S			P		U		
<i>Echidna polyzona</i> (Richardson, 1845)	S		S	S		C	South	28
<i>Gymnothorax buroensis</i> (Bleeker, 1857)			S			C	South	29
<i>Gymnothorax chilospilus</i> Bleeker, 1865		S	S			C		
<i>Gymnothorax cribroris</i> Whitley, 1932	S	S		S		C		

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Gymnothorax eurostus</i> (Abbott, 1860)	S	S	S	S		A		
<i>Gymnothorax favagineus</i> Bloch & Schneider, 1801	S			P		U		
<i>Gymnothorax fimbriatus</i> (Bennett, 1832)	V					R	South	
<i>Gymnothorax flavimarginatus</i> (Rüppell, 1830)		S				R	South	30
<i>Gymnothorax kidako</i> (Temminck & Schlegel, 1847)	S	S				R		31
<i>Gymnothorax margaritophorus</i> Bleeker, 1864			S			R	South	32
<i>Gymnothorax meleagris</i> (Shaw & Nodder, 1795)			S			R		33
<i>Gymnothorax monochrous</i> (Bleeker, 1856)	S	P				R	South	34
<i>Gymnothorax nudivomer</i> (Günther, 1867)		S				R	South	35
<i>Gymnothorax prasinus</i> (Richardson, 1848)			S	S		U	North	36
<i>Gymnothorax prionodon</i> Ogilby, 1895					S	U		37
<i>Gymnothorax pseudoherei</i> Bohlke, 2000			S			U	South	38
<i>Gymnothorax pseudothyrsoides</i> (Bleeker, 1852)	S	S		P		A		
<i>Gymnothorax rueppellii</i> (McClelland, 1844)		S				R	South	39
<i>Gymnothorax thyrsoides</i> (Richardson, 1845)	S		S	P		C		
<i>Gymnothorax undulatus</i> (Lacepède, 1803)	S					R		40
<i>Strophidon sathete</i> (Hamilton, 1822)	S					R	South	41
<b>Synphobranchidae</b>								
<i>Dysomma anguillare</i> Barnard, 1923					S	R	NAR	42
<b>Ophichthidae</b>								
<i>Echelus uropterus</i> (Temminck & Schlegel, 1847)					S	U	North	43
<i>Malvolioplis pinguis</i> (Günther, 1872)	S	S		S		C		
<i>Myrichthys colubrinus</i> (Boddaert, 1781)			V			R		
<i>Ophichthys bonaparti</i> (Kaup, 1856)	L					R		44
<i>Ophichthys</i> sp. 1	S				S	R		45
<i>Ophisurus serpens</i> (Linnaeus, 1758)	S			S		R		
<i>Scolecenchelys godeffroyi</i> (Regan, 1909)	S					U	South	46
<i>Scolecenchelys macropterus</i> Bleeker, 1857	S					R	South	47
<b>Muraenesocidae</b>								
<i>Muraenesox bagio</i> (Hamilton, 1822)	S				P	C		
<b>Congridae</b>								
<i>Ariosoma anago</i> (Temminck & Schlegel, 1847)	S					U	South	
<i>Ariosoma howensis</i> (McCulloch & Waite, 1916)					S	U		
<i>Bathycongrus</i> cf <i>guttulatus</i> (Günther, 1887)					S	R		48
<i>Conger cinereus</i> Rüppell, 1830	S					U	South	
<i>Conger wilsoni</i> (Bloch and Schneider, 1801)	S			P	S	U		
<i>Gnathophis grahami</i> Karmovskaya & Paxton, 2000					S	C		49
<b>Nettastomatidae</b>								
<i>Saurenchelys finitimus</i> (Whitley, 1935)	S					R	South	
<b>Engraulididae</b>								
<i>Engraulis australis</i> (White, 1790)	S		S		P	C		
<i>Stolephorus carpentariae</i> (De Vis, 1883)	S					C	South	
<i>Thyrssa aestuaria</i> (Ogilby, 1910)	S					A		



## Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Thyrssa hamiltonii</i> (Gray, 1835)	S					R	South	
<b>Chirocentridae</b>								
<i>Chirocentrus dorab</i> (Forsskål, 1775)	S					R	South	
<b>Clupeidae</b>								
<i>Etrumeus teres</i> (DeKay, 1842)					S	U		50
<i>Herklotsichthys castelnaui</i> (Ogilby, 1897)	S			S		A		
<i>Herklotsichthys koningsbergeri</i> (Weber & de Beaufort, 1912)	S					R	South	51
<i>Hyperlophus translucidus</i> McCulloch, 1917	S			S		A	North	
<i>Hyperlophus vittatus</i> (Castelnau, 1875)	S			S		U	North	
<i>Nematalosa erebi</i> (Günther, 1868)	S					C		
<i>Sardinella gibbosa</i> (Bleeker, 1849)	S			S		C		
<i>Sardinops sagax neopilchardus</i> (Steindachner, 1879)	S				S	C		
<i>Spratelloides delicatulus</i> (Bennett, 1832)	S		S			C	South	
<i>Spratelloides robustus</i> Ogilby, 1897	S		S	S		C	North	
<b>Chanidae</b>								
<i>Chanos chanos</i> (Forsskål, 1775)	S					U		
<b>Gonorynchidae</b>								
<i>Gonorynchus greyi</i> (Richardson, 1845)	S				S	C		
<b>Ariidae</b>								
<i>Neoarius graeffei</i> (Kner & Steindachner, 1867)	S					A		
<i>Netuna proxima</i> (Ogilby, 1898)	S					C		
<i>Plicofollis argyropleuron</i> (Valenciennes, 1840)	S					U	South	52
<b>Plotosidae</b>								
<i>Cuidoglanis macrocephalus</i> (Valenciennes, 1840)				S		C	North	53
<i>Euristhmus lepturus</i> (Günther, 1864)	S					A		
<i>Euristhmus nudiceps</i> (Günther, 1880)	L					R	South	54
<i>Paraplotosus albilabris</i> (Valenciennes, 1840)	S					R	South	55
<i>Plotosus lineatus</i> (Thunberg, 1791)	S	V	S	P	P	A		
<b>Argentinidae</b>								
<i>Glossauodon australis</i> Kobylansky, 1998					S	C		
<b>Galaxiidae</b>								
<i>Galaxias maculatus</i> (Jenyns, 1842)	S					U		
<b>Ateleopodidae</b>								
<i>Ateleopus japonicus</i> Bleeker, 1853					S	U		
<b>Aulopidae</b>								
<i>Hime curtirostris</i> (Thomson, 1967)					S	C		
<i>Hime purpurissata</i> (Richardson, 1843)					S	C		
<b>Synodontidae</b>								
<i>Harpadon translucens</i> Saville-Kent, 1889	S					R	South	
<i>Saurida argentea</i> Macleay, 1881	S					R	South	56
<i>Saurida filamentosa</i> Ogilby, 1910					S	C		
<i>Saurida gracilis</i> Quoy & Gaimard, 1824	S		S	S		U	South	
<i>Saurida macrolepis</i> Tanaka, 1917	S				S	A	?	57

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Saurida tumbil</i> (Bloch, 1795)	S					C		
<i>Saurida undosquamis</i> (Richardson, 1848)	S				S	A		
<i>Synodus binotatus</i> Schultz, 1953		S				R	South	58
<i>Synodus dermatogenys</i> Fowler, 1912	S	S		P		C		
<i>Synodus hoshinonis</i> Tanaka, 1917					P	C		59
<i>Synodus macrops</i> Tanaka, 1917					P	U	South	P; 60
<i>Synodus variegatus</i> (Lacepède, 1803)	S	S	S	P		C		
<i>Trachinocephalus myops</i> (Forster, 1801)	S				S	C		
<b>Myctophidae</b>								
<i>Diaplys kapalae</i> Nafpaktitis, Robertson & Paxton, 1995					S	U	North	61
<b>Trachipteridae</b>								
<i>Trachipterus jacksonensis</i> (Ramsay, 1881)					S	R	North	62
<b>Regalecidae</b>								
<i>Regalecus glesne</i> Ascanius, 1772	S		S		S	R	North	63
<b>Ophidiidae</b>								
<i>Neobythites nigriventris</i> Nielsen, 2002					S	C		
<i>Ophidion muraenolepis</i> (Günther, 1880)					S	C		
<i>Sirembo metachroma</i> Cohen & Robins, 1986					S	C		
<b>Bythitidae</b>								
<i>Brosomphyciops</i> sp.		S				R		64
<i>Diancistrus longifilis</i> Ogilby, 1899			S			U	South	
<i>Dinematichthys</i> sp.	S	S	S			C		65
<b>Moridae</b>								
<i>Physiculus luminosa</i> Paulin, 1983					S	U		
<i>Pseudophysicis breviuscula</i> (Richardson, 1846)					S	U	North	66
<b>Batrachoididae</b>								
<i>Batrachomoeus dubius</i> (White, 1790)	S				S	C		
<i>Halophryne queenslandiae</i> (De Vis, 1882)	S		S		S	U		
<b>Lophiidae</b>								
<i>Lophiomus setigerus</i> (Vahl, 1797)					S	C		
<b>Antennariidae</b>								
<i>Antennarius coccineus</i> (Lesson, 1830)	S	S	S	S		U		
<i>Antennarius commerson</i> (Latreille, 1804)				P		R		
<i>Antennarius nummifer</i> (Cuvier, 1817)			S			R		67
<i>Antennarius pictus</i> (Shaw & Nodder, 1794)	S					R		68
<i>Antennarius striatus</i> (Shaw, 1794)	S		S	P	S	C		
<i>Histiophryne bougainvilli</i> (Valenciennes, 1837)			S			R		69
<i>Histrio histrio</i> (Linnaeus, 1758)	S			S	S	U		
<b>Brachionichthyidae</b>								
<i>Brachionichthys australis</i> Last, Gledhill & Holmes, 2007					S	U	North	70
<b>Chaunacidae</b>								
<i>Chaunax cf. endeavouri</i> Whitley, 1929					S	U		71
<b>Ogcocephalidae</b>								



Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Halieutaea brevicanda</i> Ogilby, 1910					S	C		
<i>Halieutaea</i> cf <i>stellata</i> (Vahl, 1797)					S	C		72
<b>Mugilidae</b>								
<i>Crenimugil crenilabis</i> (Forsskål, 1775)	S	S				R		
<i>Liza argentea</i> (Quoy & Gaimard, 1825)	S			S		C		
<i>Liza subviridis</i> (Valenciennes, 1836)	S					A		
<i>Liza vaigiensis</i> (Quoy & Gaimard, 1824)	S					R		
<i>Mugil cephalus</i> Linnaeus, 1758	S		V	P		A		
<i>Myxus elongatus</i> Günther, 1861	S		S	P		A		
<i>Paramugil georgii</i> (Ogilby, 1897)	S			S		A		
<i>Valamugil seleli</i> (Forsskål, 1775)	S					R	South	73
<b>Notocheiridae</b>								
<i>Iso rhothophilus</i> (Ogilby, 1895)			S			U		
<b>Pseudomugilidae</b>								
<i>Pseudomugil signifer</i> Kner, 1867	S					A		
<b>Atherinidae</b>								
<i>Atherinomorus vaigiensis</i> (Quoy & Gaimard, 1825)	S			S		A		74
<i>Craterocephalus honoriae</i> (Ogilby, 1912)	S					R	North	75
<i>Craterocephalus mugiloides</i> (McCulloch, 1912)	S					U	South	76
<i>Hypoatherina tropicalis</i> (Whitley, 1948)	S					C		
<b>Belonidae</b>								
<i>Ablennes hians</i> (Valenciennes, 1846)	S	V	S			C		
<i>Strongylura leiura</i> (Bleeker, 1851)	S					C		
<i>Tylosurus acis</i> (Lacepède, 1803)	S	S				U		
<i>Tylosurus crocodilus</i> (Péron & Lesueur, 1821)	L					R	South	77
<i>Tylosurus gavioloides</i> (Castelnau, 1873)	S	V	V	V		A		
<b>Scomberesocidae</b>								
<i>Scomberesox saurus</i> (Walbaum, 1792)					S	U	North	78
<b>Exocoetidae</b>								
<i>Cheilopogon pinnatibarbatus melanocercus</i> (Ogilby, 1885)	S	S			S	C		
<i>Hirundichthys oxycephalus</i> (Bleeker, 1852)	S				S	U		
<i>Parexocoetus brachypterus</i> (Richardson, 1846)	S					U	South	
<b>Hemiramphidae</b>								
<i>Arrhamphus sclerolepis krefftii</i> (Steindachner, 1867)	S					A		
<i>Euleptorhamphus viridis</i> (Hasselt, 1823)					V	U		79
<i>Hemiramphus robustus</i> Günther, 1866	S					C		
<i>Hyporhamphus australis</i> (Steindachner, 1866)	S					U	North	
<i>Hyporhamphus quoyi</i> (Valenciennes, 1847)	S	S				C		
<i>Hyporhamphus regularis ardelio</i> (Whitley, 1931)	S			S		A		
<b>Monocentrididae</b>								
<i>Cleidopus gloriamaris</i> De Vis, 1882	S	P	S	P	S	C		80
<b>Trachichthyidae</b>								
<i>Aulotrachichthys novaezelandicus</i> (Kotlyar, 1980)					S	C		

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Optivus agastos</i> Gomon, 2004					S	C		81
<i>Trachichthys australis</i> Shaw, 1799	S			P	S	R	North	
<b>Berycidae</b>								
<i>Centroberyx affinis</i> (Günther, 1859)					S	C		82
<b>Holocentridae</b>								
<i>Myripristis berndti</i> Jordan & Evermann, 1903	S	S	S			C		
<i>Myripristis kuntee</i> Valenciennes, 1831		S	P			C	South	83
<i>Myripristis murdjan</i> (Forsskål, 1775)	S	S	S			C		
<i>Neoniphon sammara</i> (Forsskål, 1775)		V				R	South	
<i>Ostichthys japonicus</i> (Cuvier, 1829)					S	R		
<i>Pristilepis oligolepis</i> (Whitley, 1941)					S	R		
<i>Sargocentron caudimaculatum</i> (Rüppell, 1838)		S				R		
<i>Sargocentron diadema</i> (Lacepède, 1802)	S	S	S			C		
<i>Sargocentron rubrum</i> (Forsskål, 1775)	S	S	S			C		
<b>Zeidae</b>								
<i>Zenopsis nebulosus</i> (Temminck & Schlegel, 1845)					P	U	North	P
<i>Zeus faber</i> Linnaeus, 1758	S		S			R		
<b>Caproidae</b>								
<i>Antigonia malayana</i> Weber, 1913					S	U		84
<i>Antigonia rubicunda</i> Ogilby, 1910					S	C		
<b>Pegasidae</b>								
<i>Pegasus volitans</i> Linnaeus, 1758	S			P	S	A		
<b>Solenostomidae</b>								
<i>Solenostomus cyanopterus</i> Bleeker, 1855				P		U		
<i>Solenostomus paradoxus</i> (Pallas, 1770)	P			S		U		P
<b>Syngnathidae</b>								
<i>Campichthys tryoni</i> (Ogilby, 1890)	S					C	South	
<i>Choeroichthys brachysoma</i> (Bleeker, 1855)	S					R	South	85
<i>Choeroichthys suillus</i> (Whitley, 1951)	S					R	South	86
<i>Cosmocampus howensis</i> (Whitley, 1948)			S	S		U	North	87
<i>Filicampus tigris</i> (Castelnau, 1879)	S		S	S		C		
<i>Hippichthys cyanospilus</i> (Bleeker, 1854)	S					C	South	
<i>Hippichthys penicillus</i> (Cantor, 1849)	S					C		
<i>Hippocampus dahl</i> Ogilby, 1908	S					U	South	88
<i>Hippocampus procerus</i> Kuitert, 2001	S			S		C	South	89
<i>Hippocampus queenslandicus</i> Horne, 2001					S	U	South	
<i>Hippocampus tristis</i> Castelnau, 1872				P	S	U		
<i>Maroubra perserrata</i> Whitley, 1948		S	S			U		
<i>Micrognathus andersonii</i> (Bleeker, 1858)	S					R	South	90
<i>Phoxocampus diacanthus</i> (Schultz, 1943)			S			R	South	91
<i>Solegnathus dunckeri</i> Whitley, 1927					S	C		
<i>Stigmatopora nigra</i> Kaup, 1856	S			P		C		
<i>Syngnathoides biaculeatus</i> (Bloch, 1785)	S					C		



## Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Trachylampmus bicoarctatus</i> (Bleeker, 1857)			S	S		C		
<i>Urocampus carinirostris</i> Castelnau, 1872	S			P		A		
<i>Vanacampus margaritifer</i> (Peters, 1869)	S					R	North	92
<b>Aulostomidae</b>								
<i>Aulostomus dinensis</i> (Linnaeus, 1766)	S	P	V	P		C		
<b>Fistulariidae</b>								
<i>Fistularia commersonii</i> Rüppell, 1838	S				S	C		
<i>Fistularia petimba</i> Lacepède, 1803	S	V	V	P	S	C		
<b>Macroramphosidae</b>								
<i>Macroramphosus gracilis</i> (Lowe, 1839)					S	C		93
<i>Macroramphosus scolopax</i> (Linnaeus, 1758)					S	C		94
<b>Centriscidae</b>								
<i>Centriscus scutatus</i> Linnaeus, 1758	S					C		
<b>Dactylopteridae</b>								
<i>Dactyloptena orientalis</i> (Cuvier, 1829)	S			P	S	C		
<i>Dactyloptena papilio</i> Ogilby, 1910	S		S		S	C		
<i>Dactyloptena peterseni</i> (Nyström, 1887)					S	R	East	95
<b>Neosebastidae</b>								
<i>Maxillicosta whitleyi</i> Eschmeyer & Poss, 1976					S	C		
<i>Neosebastes incipinnis</i> Ogilby, 1910					S	C		
<i>Neosebastes johnsoni</i> Motomura, 2004					S	C	South	
<b>Scorpaenidae</b>								
<i>Dendrochirus brachypterus</i> (Cuvier, 1829)				S	S	U		
<i>Dendrochirus zebra</i> (Cuvier, 1829)	S		S	S		C		
<i>Ebosia bleekeri</i> (Döderlein, 1884)					S	R		
<i>Parascorpaena aurita</i> (Rüppell, 1838)		S	S	S		U	South	96
<i>Parascorpaena mcadamsi</i> (Fowler, 1938)			S			R	South	97
<i>Parascorpaena mossambica</i> (Peters, 1855)	S	S	S	S		C	South	98
<i>Parascorpaena picta</i> Kuhl & van Hasselt, 1829	S					R	South	99
<i>Pterois antennata</i> (Bloch, 1787)		S	S			U		
<i>Pterois volitans</i> (Linnaeus, 1758)	S	P	S	S	S	C		
<i>Scorpaena cardinalis</i> Richardson, 1842	S	S	S	P	S	C		
<i>Scorpaena neglecta</i> Temminck & Schlegel, 1843					S	R		100
<i>Scorpaena</i> sp. 1	S	S	S	S		C		101
<i>Scorpaena</i> sp. 2		S				R	?	102
<i>Scorpaenodes guamensis</i> Quoy & Gaimard, 1824	S	S	S	S		C		
<i>Scorpaenodes littoralis</i> (Tanaka, 1917)	S	S	S	S		A	North	103
<i>Scorpaenopsis colticeps</i> Fowler, 1938			S			R	South	104
<i>Scorpaenopsis diabolus</i> Heckel, 1837	S	S		S		R		105
<i>Scorpaenopsis eschmeyeri</i> Randall & Greenfield, 2004			S	P		R	South	106
<i>Scorpaenopsis macrochir</i> Ogilby, 1910	S		S	S		U		
<i>Scorpaenopsis venosa</i> (Cuvier, 1829)	S		S	S		U	South	
<i>Sebastapistes cyanostigma</i> (Bleeker, 1856)		V	S			C	South	107

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Sebastapistes tinkhami</i> (Fowler, 1946)		S	S			C	South	108
<i>Taenianotus triacanthus</i> Lacepède, 1802	S		S	S		C		
<b>Apistidae</b>								
<i>Apistops caloundra</i> (De Vis, 1886)	S				S	U	South	
<i>Apistus carinatus</i> (Bloch & Schneider, 1801)	S				S	U		
<b>Tetrarogidae</b>								
<i>Ablabys taenianotus</i> (Cuvier, 1829)		S		S		U		
<i>Centropogon australis</i> (White, 1790)	S		S	S	S	A		
<i>Centropogon marmoratus</i> Günther, 1862	S					C		
<i>Liocranium praepositum</i> Ogilby, 1903	S					C	South	
<i>Neocentropogon aeglefinus</i> (Weber, 1913)					S	U	South	109
<i>Notesthes robusta</i> (Günther, 1860)	S					C		
<i>Ocosia cf. apia</i> Poss & Eschmeyer, 1975					S	U	?	110
<i>Paracentropogon vespa</i> Ogilby, 1910	S					R	South	111
<i>Paracentropogon</i> sp. 1		S				R	?	112
<b>Synanceiidae</b>								
<i>Erosa erosa</i> (Langsdorf, 1829)	S				S	C		
<i>Inimicus caledonicus</i> (Sauvage, 1878)	S			P		C		
<i>Minous versicolor</i> Ogilby, 1910	S				P	C		
<i>Synanceia horrida</i> (Linnaeus, 1766)	S			P		C		
<b>Aploactinidae</b>								
<i>Adventor elongatus</i> (Whitley, 1952)	S					U	South	
<i>Aploactis aspera</i> (Richardson, 1844)					S	R		
<i>Bathyaploactis ornatissimus</i> Whitley, 1933	S					C	South	113
<i>Cocotropus microps</i> Johnson, 2004				S		R	North	114
<i>Erisphex aniarus</i> (Thomson, 1967)					S	U	South	
<i>Kanekonia queenslandica</i> Whitley, 1952					S	R	South	115
<i>Paraploactis trachyderma</i> Bleeker, 1865)	S			P		C		
<i>Peristrominous dolosus</i> Whitley, 1952	S					U	South	
<b>Pataecidae</b>								
<i>Pataecus fronto</i> Richardson, 1844	S				S	U		
<b>Triglidae</b>								
<i>Chelidonichthys kumu</i> (Lesson, 1826)	S				S	C		
<i>Lepidotrigla argus</i> Ogilby, 1910	S				S	A		
<i>Lepidotrigla grandis</i> Ogilby, 1910					S	C		
<i>Lepidotrigla papilio</i> (Cuvier, 1829)					S	U	North	P; 116
<i>Lepidotrigla umbrosa</i> Ogilby, 1910					S	C		
<i>Pterygotrigla andertoni</i> Waite, 1910					S	U		
<i>Satyrichthys lingi</i> (Whitley, 1933)					S	U		
<b>Bembridae</b>								
<i>Bembras macrolepis</i> Imamura, 1998					S	U		
<b>Platycephalidae</b>								
<i>Ambiserrula jugosa</i> (McCulloch, 1914)	S			S	S	C		



## Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Cymbacephalus bosschei</i> (Bleeker, 1860)	S					R	South	
<i>Cymbacephalus nematophthalmus</i> (Günther, 1860)	S			P		C		
<i>Inegocia japonica</i> (Cuvier, 1829)	S				P	C	South	
<i>Platycephalus caeruleopunctatus</i> McCulloch, 1922	S				S	C		
<i>Platycephalus endrachtensis</i> Quoy & Gaimard, 1824	S		S		S	A		117
<i>Platycephalus fuscus</i> Cuvier, 1829	S	P	V	P		A		
<i>Platycephalus indicus</i> (Linnaeus, 1758)	S					C		
<i>Platycephalus longispinis</i> Macleay, 1884	S				S	C		
<i>Platycephalus marmoratus</i> Stead, 1908		S			S	C		
<i>Platycephalus westraliae</i> (Whitley, 1938)	S					C		118
<i>Ratabulus diversidens</i> (McCulloch, 1914)					S	A		
<i>Rogadius mcgrouteri</i> Imamura, 2007					S	R	South	119
<i>Sorsogona tuberculata</i> (Cuvier, 1829)	S					R	South	
<i>Sunagocia arenicola</i> (Schultz, 1966)			S			U	South	120
<i>Thysanophrys celebica</i> (Bleeker, 1854)	S			S		U	South	121
<i>Thysanophrys chiltonae</i> Schultz, 1966			S			R	South	122
<i>Thysanophrys cirronasa</i> (Richardson, 1848)	S					R	North	123
<b>Hoplichthyidae</b>								
<i>Hoplichthys ogilbyi</i> McCulloch, 1914					S	C		
<b>Latidae</b>								
<i>Psammoderus waigiensis</i> (Cuvier, 1828)	S					R	South	124
<b>Ambassidae</b>								
<i>Ambassis jacksoniensis</i> Macleay, 1881	S			S		A		
<i>Ambassis marianus</i> Günther, 1880	S			S		A		
<b>Acropomatidae</b>								
<i>Apogonops anomalus</i> Ogilby, 1896					S	C		
<i>Synagrops japonicus</i> (Döderlein, 1883)					S	C		
<b>Serranidae: Anthiinae</b>								
<i>Caprodon krasnyukovae</i> Kharin, 1983					S	C	North	125
<i>Hypoplectrodes annulatus</i> (Günther, 1859)					S	U		126
<i>Hypoplectrodes jamiesoni</i> Ogilby, 1908	S					C		
<i>Hypoplectrodes maccullochi</i> (Whitley, 1929)	S			S		U		127
<i>Lepidoperca brochata</i> Katayama & Fujii, 1982					S	C		
<i>Lepidoperca caesiopercula</i> (Whitley, 1951)					S	C	North	
<i>Odontanthias grahami</i> Randall & Heemstra, 2006					S	R	North	128
<i>Plectranthias longimanus</i> (Weber, 1913)			S			R	South	129
<i>Pseudanthias fasciata</i> (Kamohara, 1954)		P	V			C	South	P
<i>Pseudanthias pictilis</i> (Randall & Allen, 1978)		V				U		
<i>Pseudanthias pleurotaenia</i> (Bleeker, 1857)		P	V			U	South	
<i>Pseudanthias rubrizonatus</i> (Randall, 1983)		P				U	South	
<i>Pseudanthias squamipinnis</i> (Peters, 1855)		S	P	P		A		
<i>Pseudanthias</i> sp. 1					S	U	?	130
<b>Serranidae: Epinephelinae</b>								

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Cephalopholis argus</i> (Bloch & Schneider, 1801)		S		P		U	South	131
<i>Cephalopholis boenak</i> (Bloch, 1790)	S					R	South	132
<i>Cephalopholis miniata</i> (Forsskål, 1775)		V		V		R	South	
<i>Cephalopholis sonnerati</i> (Valenciennes, 1828)		S				U	South	133
<i>Cephalopholis urodeta</i> (Bloch & Schneider, 1801)		S	S			C	South	134
<i>Chromileptes altivelis</i> (Valenciennes, 1828)	S	S		P		R	South	
<i>Diploprion bifasciatum</i> Kuhl & van Hasselt, 1828	S	S	P	P		C		
<i>Epinephelus coioides</i> (Hamilton, 1822)	S	P	P	P		A		
<i>Epinephelus cyanopodus</i> (Richardson, 1846)	S	V	S	S		C		
<i>Epinephelus daemeli</i> (Günther, 1876)	S	S	P		P	U		
<i>Epinephelus fasciatus</i> (Forsskål, 1775)	S	S	S	P		C		
<i>Epinephelus howlandi</i> (Günther, 1873)		V				R	South	
<i>Epinephelus lanceolatus</i> (Bloch, 1790)	S	V	S	P		U		P
<i>Epinephelus macrospilus</i> (Bleeker, 1855)		S				R	South	135
<i>Epinephelus uaculatus</i> (Bloch, 1790)		S		P		C		
<i>Epinephelus ualabarius</i> (Bloch & Schneider, 1801)	S	P	S	P		C		
<i>Epinephelus morrhua</i> (Valenciennes, 1833)					S	U		
<i>Epinephelus octofasciatus</i> Griffin, 1926					S	C		
<i>Epinephelus quoyanus</i> (Valenciennes, 1830)	S	S	V	P		U		
<i>Epinephelus rivulatus</i> (Valenciennes, 1830)	L	S		P		U	North	136
<i>Epinephelus sexfasciatus</i> (Kuhl & van Hasselt, 1828)	S					R	South	
<i>Epinephelus tauvina</i> (Forsskål, 1775)		S	S			U		
<i>Epinephelus tukula</i> Morgans, 1959		V				R	South	
<i>Epinephelus undulostriatus</i> (Peters, 1867)	S	S	V	P		C		
<i>Grammistes sexlineatus</i> (Thunberg, 1792)	S			P		U		
<i>Plectropomus laevis</i> (Lacepède, 1801)		V				R	South	
<i>Plectropomus leopardus</i> (Lacepède, 1802)	V	V		P		U	South	
<i>Plectropomus uaculatus</i> (Bloch, 1790)	V					R	South	
<i>Rainfordia opercularis</i> McCulloch, 1923	S	P				U	South	
<i>Triso dermopterus</i> (Temminck & Schlegel, 1843)		S	P		S	C		
<i>Variola louti</i> (Forsskål, 1775)		S				R	South	
<b>Serranidae: Serraninae</b>								
<i>Acanthistius ciuctus</i> (Günther, 1859)			S			R	North	137
<i>Acanthistius ocellatus</i> (Günther, 1859)	S					R		
<b>Callanthiidae</b>								
<i>Callanthias australis</i> Ogilby, 1899					S	R		138
<b>Centrogeniidae</b>								
<i>Centrogenys vaigiensis</i> (Quoy & Gaimard, 1824)	S			P		C		
<b>Percichthyidae</b>								
<i>Macquaria novemaculeata</i> (Steindachner, 1866)	S					C		
<b>Plesiopidae</b>								
<i>Belonepterygion fasciolatum</i> (Ogilby, 1889)	S	S				U		
<i>Fraudella carassioops</i> Whitley, 1935					S	R	South	139



## Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Paraplesiops poweri</i> Ogilby, 1908	S					C		
<i>Plesiops genaricus</i> Mooi & Randall, 1991	S			S		R	South	140
<i>Trachinops taeniatus</i> Günther, 1861	V		V			U		
<b>Pseudochromidae</b>								
<i>Ogilbyina novaehollandiae</i> (Steindachner, 1880)	S					U	South	141
<i>Pseudochromis cyanotaenia</i> Bleeker, 1857	S	S	S			U		
<i>Pseudochromis fuscus</i> Müller & Troschel, 1849	S					R	South	142
<i>Pseudoplesiops immaculatus</i> Gill & Edwards, 2002		S				R	South	143
<b>Opistognathidae</b>								
<i>Opistognathus eximius</i> (Ogilby, 1908)	S	S				U	South	144
<i>Opistognathus jacksoniensis</i> (Macleay, 1881)	S					U		
<b>Apogonidae</b>								
<i>Apogon aureus</i> (Lacepède, 1802)	P	P	S	P		U		
<i>Apogon capricornis</i> Allen & Randall, 1993	S					C		
<i>Apogon cavitiensis</i> (Jordan & Seale, 1907)	S			P		C		
<i>Apogon cookii</i> Macleay, 1881	S			P		U		145
<i>Apogon crassiceps</i> Garman, 1903	S	S	S	S		C		
<i>Apogon cyanosoma</i> (Bleeker, 1853)		V				U		
<i>Apogon doederleini</i> Jordan & Snyder, 1901	S	V	S	P		C		
<i>Apogon doryssa</i> (Jordan & Seale, 1906)		S				R	South	146
<i>Apogon fasciatus</i> (White, 1790)	S			P		A		
<i>Apogon fraenatus</i> Valenciennes, 1832	V		V			U		
<i>Apogon kallopterus</i> Bleeker, 1856		P	S			R	South	147
<i>Apogon limenus</i> Randall & Hoese, 1988	S	S	S	S		A		
<i>Apogon nigrofasciatus</i> Lachner, 1953			S	V		U	South	148
<i>Apogon novemfasciatus</i> Cuvier, 1828			V	S		C	South	149
<i>Apogon pallidofasciatus</i> Allen, 1987	S			P		C	South	150
<i>Apogon poecilopterus</i> Cuvier, 1828	S					C	South	
<i>Apogon properuptus</i> (Whitley, 1964)	P	V	P	P		C		
<i>Apogon semilineatus</i> Temminck & Schlegel, 1843					S	U	South	151
<i>Apogon seminigracandus</i> Greenfield, 2007	S					U	NAR	152
<i>Apogon semiornatus</i> Peters, 1876	S	V	S	S		U		
<i>Apogon taeniophorus</i> Regan, 1908			S			R		153
<i>Apogon</i> sp. 1	S					R	?	154
<i>Apogonichthyoides atripes</i> (Ogilby, 1916)	S			P		C		
<i>Apogonichthyoides timorensis</i> (Bleeker, 1854)				S		R	South	
<i>Apogonichthys ocellatus</i> Weber, 1913				S		R		
<i>Archamia leai</i> Waite, 1916		P				R	South	P
<i>Cheilodipterus macrodon</i> (Lacepède, 1802)		V	P			U	South	
<i>Cheilodipterus quinquelineatus</i> Cuvier, 1828				P		R		
<i>Foa fo</i> Jordan & Seale, 1905	S			S		C	South	155
<i>Fowleria variegata</i> (Valenciennes, 1832)	S					U	South	156
<i>Nectania viria</i> Fraser, 2008		P	S			R	South	157

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Siphania cuneiceps</i> Whitley, 1941	S					U	South	158
<i>Siphania rosiegaster</i> (Ogilby, 1886)	S					A		
<i>Siphania zaribae</i> Whitley, 1959		S				U	South	159
<b>Priacanthidae</b>								
<i>Cookeolus japonicus</i> (Cuvier, 1829)					S	U		
<i>Heteropriacanthus cruentatus</i> (Lacepède, 1801)		P				R		
<i>Priacanthus hamrur</i> (Forsskål, 1775)	S	P	V			C		
<i>Priacanthus macracanthus</i> Cuvier, 1829	S	S	S		S	A		
<i>Pristigenys nipponia</i> (Cuvier, 1829)					S	U	East	160
<b>Sillaginidae</b>								
<i>Sillago analis</i> Whitley, 1943	S					C	South	
<i>Sillago ciliata</i> Cuvier, 1829	S			S		A		
<i>Sillago flindersi</i> McKay, 1985					S	C		
<i>Sillago iugenuua</i> McKay, 1985	S					U	South	161
<i>Sillago maculata</i> Quoy & Gaimard, 1824	S				P	A		
<i>Sillago robusta</i> Stead, 1908	S				S	A		
<b>Malacanthidae</b>								
<i>Branchiostegus serratus</i> Dooley & Paxton, 1975					S	U		
<i>Malacanthus brevisrostris</i> Guichenot, 1848	V	S				U		
<b>Pomatomidae</b>								
<i>Pomatomus saltatrix</i> (Linnaeus, 1766)	S		V	P		A		
<b>Echeneididae</b>								
<i>Echeneis naucrates</i> Linnaeus, 1758	S	V	S	P		C		
<i>Remora remora</i> Linnaeus, 1758	S					U		
<b>Glaucosomatidae</b>								
<i>Glaucosoma scapulare</i> Ramsay, 1881	S	S	S	P	S	C		
<b>Kuhliidae</b>								
<i>Kuhlia mugil</i> (Forster, 1801)	V		S			U		
<b>Rachycentridae</b>								
<i>Rachycentron canadus</i> (Linnaeus, 1766)	S	V	V	S		C		
<b>Coryphaenidae</b>								
<i>Coryphaena hippurus</i> Linnaeus, 1758					S	C		
<b>Carangidae</b>								
<i>Alectis ciliaris</i> (Bloch, 1787)	S			S		C		
<i>Alectis indica</i> (Rüppell, 1830)	S	S		S		C		
<i>Alepes apercna</i> Grant, 1987	S		V	P		A		
<i>Atule mate</i> (Cuvier, 1833)	S	P				U		
<i>Carangoides caeruleopinnatus</i> (Rüppell, 1830)	S			P		U		
<i>Carangoides chrysophrys</i> (Cuvier, 1833)	S	S	V	S		C		
<i>Carangoides dinema</i> Bleeker, 1851	S			S		R	South	162
<i>Carangoides equula</i> (Temminck & Schlegel, 1844)					S	C	South	163
<i>Carangoides ferdau</i> (Forsskål, 1775)	V			P		U	South	
<i>Carangoides fulvoguttatus</i> (Forsskål, 1775)	V	S				C	South	164



## Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Carangoides gymnotellus</i> (Cuvier, 1833)		P				U	South	
<i>Carangoides lunerosus</i> (McCulloch, 1915)	S					U		
<i>Carangoides malabaricus</i> (Bloch & Schneider, 1831)	S					C		
<i>Carangoides oblongus</i> (Cuvier, 1833)	S					R	South	165
<i>Carangoides orthogrammus</i> (Jordan & Gilbert, 1882)		S				U		
<i>Caranx ignobilis</i> (Forsskål, 1775)	S	S		P		C		
<i>Caranx melampygus</i> Cuvier, 1833	S	P		P		C		
<i>Caranx papuensis</i> Alleyne & Macleay, 1877		S	S			C	South	166
<i>Caranx sexfasciatus</i> Quoy & Gaimard, 1825	S	S		S		A		
<i>Decapterus macrellus</i> (Cuvier, 1833)			S			R	North	167
<i>Decapterus russelli</i> (Rüppell, 1830)	S	V	V	P		A	South	168
<i>Elagatis bipinnulatus</i> (Quoy & Gaimard, 1825)		V	S			C		
<i>Gnathanodon speciosus</i> (Forsskål, 1775)	S	V		S		C	South	
<i>Megalaspis cordyla</i> (Linnaeus, 1758)	S					U		
<i>Naucrates ductor</i> (Linnaeus, 1758)	S					U		
<i>Parastromateus niger</i> (Bloch, 1795)	S				P	R	South	169
<i>Pseudocaranx cf dentex</i> (Bloch & Schneider, 1801)	S	S	V	P		C		170
<i>Scomberoides commersonianus</i> Lacepède, 1801	S					R	South	171
<i>Scomberoides lysan</i> (Forsskål, 1775)	S	V		P		C		
<i>Scomberoides tol</i> (Cuvier, 1832)	S			P		U		
<i>Selaroides leptolepis</i> (Kuhl & van Hasselt, 1833)	S	P				C		
<i>Seriola dumerili</i> (Risso, 1810)	S	S		P	P	C		
<i>Seriola lippos</i> Günther, 1876	S	S			P	U	North	172
<i>Seriola lalandi</i> Valenciennes, 1833	S	S	P	P	P	C		
<i>Seriola rivoliana</i> Valenciennes, 1833		S				C	North	
<i>Seriolina nigrofasciata</i> (Rüppell, 1829)	S					U	South	
<i>Trachinotus anak</i> Ogilby, 1909	S					U	South	
<i>Trachinotus blochii</i> (Lacepède, 1801)	S					U		
<i>Trachinotus coppingeri</i> (Günther, 1884)	S	P	S	P		A		
<i>Trachurus declivis</i> Jenyns, 1841	S					C		
<i>Trachurus novaezelandiae</i> Richardson, 1843	S				S	C		
<i>Ulua mentalis</i> (Cuvier, 1833)				P		U	South	P
<i>Uraspis uraspis</i> (Gunther, 1860)	S					R	South	173
<b>Leiognathidae</b>								
<i>Leiognathus fasciatus</i> (Lacepède, 1803)				P		C	South	P
<i>Nuclequula gerreoides</i> (Bleeker, 1851)	S					C	South	174
<i>Equulites moretouiensis</i> (Ogilby, 1912)	S					A		
<b>Bramidae</b>								
<i>Pteraclis aesticola</i> (Jordan & Snyder, 1901)			S			R	North	175
<b>Emmelichthyidae</b>								
<i>Emmelichthys stultsakeri</i> Heemstra & Randall, 1977					S	C	North	176
<b>Lutjanidae</b>								
<i>Aprion virescens</i> Valenciennes, 1830		S				U		

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Caesio caerulea</i> Lacepède, 1801	S	P	V			C		
<i>Caesio cuning</i> (Bloch, 1791)		P	V			C		
<i>Caesio lunaris</i> Cuvier, 1830		V				R	South	
<i>Etelis coruscans</i> Valenciennes, 1862					S	U		177
<i>Lutjanus adetii</i> (Castelnau, 1873)	S	S				U		
<i>Lutjanus argenteimaculatus</i> (Forsskål, 1775)	S	V		P		C		
<i>Lutjanus bohar</i> (Forsskål, 1775)		S	V	P		U	South	
<i>Lutjanus carponotatus</i> (Richardson, 1842)	S	P				U	South	
<i>Lutjanus fulviflamma</i> (Forsskål, 1775)	V	S	S	V		C		
<i>Lutjanus fulvus</i> (Bloch & Schneider, 1801)		V				R		
<i>Lutjanus gibbus</i> (Forsskål, 1775)	S	S		P		U		
<i>Lutjanus kasmira</i> (Forsskål, 1775)	S	S	S			C		
<i>Lutjanus malabaricus</i> Schneider, 1801	S			P		U		
<i>Lutjanus quinquelineatus</i> (Bloch, 1790)	S		V	P		C		
<i>Lutjanus russelli</i> (Bleeker, 1849)	S	S	V	P		A		
<i>Lutjanus sebae</i> (Cuvier, 1828)	S	S				C		
<i>Lutjanus vitta</i> (Quoy & Gaimard, 1824)	S	V				U	South	178
<i>Paracaesio sordida</i> Abe & Shinohara, 1962					S	R	South	179
<i>Paracaesio xanthura</i> (Bleeker, 1869)	S	S	P		S	A		
<i>Pristipomoides argyrogrammicus</i> (Valenciennes, 1831)					S	U		
<i>Pristipomoides filamentosus</i> (Valenciennes, 1830)					S	C		
<i>Pristipomoides sieboldii</i> (Bleeker, 1857)					S	C		180
<i>Pterocaesio chrysozona</i> (Cuvier, 1830)	L	V	V			C		181
<i>Pterocaesio digramma</i> (Bleeker, 1865)	S	V	V	P		A		
<i>Pterocaesio tile</i> (Cuvier, 1830)		S	V			U	South	182
<i>Symphorus neuatophorus</i> (Bleeker, 1860)	S	V	V	P		C	South	
<b>Lobotidae</b>								
<i>Lobotes surinamensis</i> (Bloch, 1790)	S				S	U		
<b>Gerreidae</b>								
<i>Gerres filamentosus</i> Cuvier, 1829	S					R	South	183
<i>Gerres oyena</i> (Forsskål, 1775)	S					C	South	184
<i>Gerres subfasciatus</i> (Cuvier, 1830)	S			S		A		
<b>Haemulidae</b>								
<i>Diagramma pictum labiosum</i> Macleay, 1883	S	V	V	P		C		
<i>Plectorhinchus flavomaculatus</i> (Ehrenberg, 1830)	S	S	P	P		A		
<i>Plectorhinchus gibbosus</i> (Lacepède, 1802)	S	P	S	P		C		
<i>Plectorhinchus lessonii</i> (Cuvier, 1830)	V	S				U	South	185
<i>Plectorhinchus picus</i> (Cuvier, 1830)	V	S	V			C		
<i>Plectorhinchus schotaf</i> (Forsskål, 1775)	S	S				C		186
<i>Pomadasys argenteus</i> (Forsskål, 1775)	S					U		
<i>Pomadasys kaakan</i> (Cuvier, 1830)	S					U		
<i>Pomadasys maculatus</i> (Bloch, 1797)	S					U	South	
<b>Sparidae</b>								



Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Acanthopagrus australis</i> (Günther, 1859)	S	V	V	P		A		
<i>Argyrops spinifer</i> (Forsskål, 1775)	S					U		
<i>Dentex spariformis</i> Ogilby, 1910					S	C		
<i>Pagrus auratus</i> Schneider, 1801	S	S	V	P	S	A		
<i>Rhabdosargus sarba</i> (Forsskål, 1775)	S	V	V	P		A		
<b>Lethrinidae</b>								
<i>Gnathodentex aurolineatus</i> (Lacepède, 1802)		S	V			C		
<i>Gymnocranius audleyi</i> Ogilby, 1916	S	S	P		S	C	South	
<i>Gymnocranius euauus</i> (Günther, 1879)		S				U		
<i>Lethrinus atkinsoni</i> Seale, 1910		S				R	South	187
<i>Lethrinus geuivittatus</i> Valenciennes, 1830	S	V	P	P	P	A		
<i>Lethrinus laticaudis</i> Alleyne & Macleay, 1877	S	V	V	P		C		
<i>Lethrinus miniatus</i> (Schneider, 1801)		S	S		S	C		
<i>Lethrinus nebulosus</i> (Forsskål, 1775)	S	V	V	P		A		
<i>Lethrinus rubrioperculatus</i> Sato, 1978		S	V			C		
<i>Monotaxis grandoculis</i> (Forsskål, 1775)		P	S			C	South	188
<b>Nemipteridae</b>								
<i>Nemipterus aurifilum</i> (Ogilby, 1910)					S	C		
<i>Nemipterus hexodon</i> (Quoy & Gaimard, 1824)	S	S				U	South	189
<i>Nemipterus peronii</i> (Valenciennes, 1830)	S					U	South	190
<i>Nemipterus theodori</i> Ogilby, 1916					S	A		
<i>Pentapodus aureofasciatus</i> Russell, 2001		S				C		
<i>Pentapodus paradiseus</i> (Günther, 1859)	S	V	V	P	S	A		
<i>Scolopsis bilineatus</i> (Bloch, 1793)	S	P	P	P		C		
<i>Scolopsis monogramma</i> (Kuhl & Van Hasselt, 1830)	S	S	V	P		C		
<b>Polynemidae</b>								
<i>Polydactylus macrochir</i> (Günther, 1867)	S					C	South	191
<i>Polydactylus multiradiatus</i> (Günther, 1860)	S					A		
<b>Sciaenidae</b>								
<i>Argyrosomus japonicus</i> (Temminck & Schlegel, 1843)	S			P	P	C		
<i>Atractoscion aequidens</i> (Cuvier, 1830)		P			P	C		
<i>Johinius australis</i> (Günther, 1880)	S					U	South	192
<i>Johinius borneensis</i> (Bleeker, 1850)	S					A		193
<i>Nibea soldado</i> (Lacepède, 1802)	S					R	South	194
<b>Mullidae</b>								
<i>Mulloidichthys flavolineatus</i> (Lacepède, 1801)	S	S	V			C		
<i>Mulloidichthys vaucioleusis</i> (Valenciennes, 1831)		S	P			C		
<i>Parupeneus barberinoides</i> (Bleeker, 1852)				P		R		195
<i>Parupeneus barberinus</i> (Lacepède, 1801)				P		R		196
<i>Parupeneus ciliatus</i> (Lacepède, 1802)	S	S	S	S		C		
<i>Parupeneus cyclostomus</i> (Lacepède, 1801)		S				R		
<i>Parupeneus heptacanthus</i> (Lacepède, 1802)	S					R	South	197
<i>Parupeneus iudicus</i> (Shaw, 1803)	V			P		R	South	

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Parupeneus multifasciatus</i> (Quoy & Gaimard, 1825)	S	V	V	P		C		
<i>Parupeneus pleurostigma</i> (Bennett, 1831)		S	P			U		
<i>Parupeneus spilurus</i> (Bleeker, 1854)	S	S	S	P	S	A		
<i>Upeneichthys lineatus</i> (Bloch & Schneider, 1801)				P	S	C		
<i>Upeneus australiae</i> Kim & Nakaya, 2002	S					A		198
<i>Upeneus filifer</i> (Ogilby, 1910)					S	U		
<i>Upeneus tragula</i> Richardson, 1846	S		V	P	S	A		
<b>Pempheridae</b>								
<i>Parapriacanthus ransonneti</i> Steindachner, 1870	V					U		199
<i>Pempheris affinis</i> McCulloch, 1911	V	S	S	P		C		
<i>Pempheris oualensis</i> Cuvier, 1831		S				C	South	200
<i>Pempheris schwenkii</i> Bleeker, 1855	S	V	V	S		C	South	201
<i>Pempheris ypsilychnus</i> Mooi & Jubb, 1996	S	V				C	South	202
<b>Leptobramidae</b>								
<i>Leptobrama muelleri</i> Steindachner, 1879	S					R	South	203
<b>Monodactylidae</b>								
<i>Monodactylus argenteus</i> (Linnaeus, 1758)	S	P	V	P		A		
<i>Schuetta scalaripinnis</i> Steindachner, 1866	S	P	V	P		A		
<b>Chaetodontidae</b>								
<i>Amphichaetodon howensis</i> (Waite, 1903)					S	R	North	204
<i>Chaetodon aureofasciatus</i> Macleay, 1878	S		V			U		
<i>Chaetodon auriga</i> Forsskål, 1775	S	V	V	P		C		
<i>Chaetodon baronessa</i> Cuvier, 1831		P				R		P
<i>Chaetodon bennetti</i> Cuvier, 1831	S					R		205
<i>Chaetodon citrinellus</i> Cuvier, 1831	S	P	V	P		C		
<i>Chaetodon ephippium</i> Cuvier, 1831	S			P		U		
<i>Chaetodon flavirostris</i> Günther, 1873	S	S	S	S		A		
<i>Chaetodon guentheri</i> Ahl, 1913	S	V	V	P	S	A		
<i>Chaetodon kleinii</i> Bloch, 1790	S	V	S	P		C		
<i>Chaetodon lincolatus</i> Cuvier, 1831	V	P		P		U		
<i>Chaetodon lunula</i> (Lacepède, 1803)	S	V		P		C		
<i>Chaetodon lunulatus</i> Quoy & Gaimard, 1825	S	P				U		206
<i>Chaetodon melannotus</i> Bloch & Schneider, 1801	S	P	V	P		C		
<i>Chaetodon mertensii</i> Cuvier, 1831	S	S	P	P		U		
<i>Chaetodon ocellicaudus</i> Cuvier, 1831				P		U	South	P; 207
<i>Chaetodon ornatissimus</i> Cuvier, 1831		P				R	South	
<i>Chaetodon pelewensis</i> Kner, 1868	V	P	V	P		U		
<i>Chaetodon plebeius</i> Cuvier, 1831	S	P	P			C		
<i>Chaetodon rafflesii</i> Bennett, 1830	V					R	South	208
<i>Chaetodon rainfordi</i> McCulloch, 1923	S	P	V			C		
<i>Chaetodon reticulatus</i> Cuvier, 1831		S				R	South	209
<i>Chaetodon speculum</i> Cuvier, 1831	S	P	V			U		
<i>Chaetodon trifascialis</i> (Quoy & Gaimard, 1824)	P	P	S			C		

Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Chaetodon ulietensis</i> Cuvier, 1831	S					R		210
<i>Chaetodon unimaculatus</i> Bloch, 1787		P	P			U		
<i>Chaetodon vagabundus</i> Linnaeus, 1758	S	S	V	P		C		
<i>Chelmon rostratus</i> (Linnaeus, 1758)	S	S	P	P		C		
<i>Chelmonops truncatus</i> (Kner, 1859)	S		V	P		C		
<i>Coradion altivelis</i> McCulloch, 1916	S					C		
<i>Forcipiger flavissimus</i> Jordan & McGregor, 1898	S	S	S			C		
<i>Hemitaurichthys polylepis</i> (Bleeker, 1857)		P	S			C		
<i>Heniochus acuminatus</i> (Linnaeus, 1758)	S	P	P	P		A		
<i>Heniochus chrysostomus</i> Cuvier, 1831		V	V	V		U		
<i>Heniochus diphreutes</i> Jordan, 1903		P	V			C		
<i>Heniochus monoceros</i> Cuvier, 1831	S	V	S	P		C		
<i>Parachaetodon ocellatus</i> (Cuvier, 1831)	S			P		C		
<b>Pomacanthidae</b>								
<i>Centropyge bicolor</i> (Bloch, 1787)	S	P	S			U		
<i>Centropyge hispinosa</i> (Günther, 1860)	V	S		P		U		
<i>Centropyge flavissima</i> (Cuvier, 1831)		S		P		R	South	211
<i>Centropyge tibicen</i> (Cuvier, 1831)	S	S	S	P		C		
<i>Centropyge vroliki</i> (Bleeker, 1853)	V	S	S	P		U		
<i>Chaetodontoplus conspicillatus</i> (Waite, 1900)	V			P		R		
<i>Chaetodontoplus duboulayi</i> (Günther, 1867)	V					R	South	212
<i>Chaetodontoplus meredithi</i> Kuitert, 1990	S	P	V			C		
<i>Pomacanthus imperator</i> (Bloch, 1787)	S	S	S			C		
<i>Pomacanthus semicirculatus</i> (Cuvier, 1831)	V	S	S	P		C		
<i>Pomacanthus xanthometapon</i> (Bleeker, 1853)		S				R	South	213
<i>Pygoplites diacanthus</i> (Boddaert, 1772)	V					R		
<b>Enoplosidae</b>								
<i>Enoplosus armatus</i> (White, 1790)	S	S		P		U		
<b>Pentacerotidae</b>								
<i>Paristiopterus labiosus</i> (Günther, 1871)	S	S				U		
<i>Zanclistius elevatus</i> (Ramsay & Ogilby, 1888)					S	R		214
<b>Kyphosidae</b>								
<i>Atypichthys strigatus</i> (Günther, 1860)	S	S	S	P		A		
<i>Girella cyanea</i> Macleay, 1881		S				R	North	215
<i>Girella elevata</i> Macleay, 1881	S		S			R		
<i>Girella tricuspidata</i> (Quoy & Gaimard, 1824)	S			P		A		P
<i>Kyphosus bigibbus</i> (Lacepède, 1803)	S	P	S	P		C		
<i>Kyphosus cinerascens</i> (Forsskål, 1775)	S	S				C		
<i>Kyphosus pacificus</i> Sakai & Nakabo, 2004		S	S			U	South	216
<i>Kyphosus sydneyanus</i> (Günther, 1866)	S	S		P		C		
<i>Kyphosus vaigiensis</i> (Quoy & Gaimard, 1825)	S	V				C		
<i>Microcanthus strigatus</i> (Langsdorff, 1831)	S	V	S	S	S	A		
<i>Scorpius lineolata</i> Kner, 1865	S	S	S	P	S	A		



FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<b>Arripidae</b>								
<i>Arripis trutta</i> (Forster, 1801)			V			U	North	217
<b>Terapontidae</b>								
<i>Helotes sexlineatus</i> (Quoy & Gaimard, 1825)	S					U	South	218
<i>Pelates sexlineatus</i> (Quoy & Gaimard, 1824)	S			P		A		219
<i>Pelates quadrilineatus</i> (Bloch, 1790)	S					R	South	219
<i>Terapon jarbua</i> (Forsskål, 1775)	S					C		
<i>Terapon theraps</i> Cuvier, 1829	S					R	South	220
<b>Cirrhitidae</b>								
<i>Amblycirrhites binacula</i> Jenkins, 1903			S			R	South	221
<i>Cirrhitichthys aprinus</i> (Cuvier, 1829)	S	S	P	P		C		
<i>Cirrhitichthys falco</i> Randall, 1963	S	P	S	S		C		
<i>Cirrhitichthys oxycephalus</i> (Bleeker, 1855)			P			R		
<i>Cyprinocirrhites polyactis</i> (Bleeker, 1874)		V	P			U		
<i>Paracirrhites arcatus</i> (Cuvier, 1829)		P	V			C	South	P
<i>Paracirrhites forsteri</i> (Bloch & Schneider, 1801)		P	P			C		
<b>Chironemidae</b>								
<i>Chironemus marmoratus</i> Günther, 1860	V		S	V		C		
<b>Aplodactylidae</b>								
<i>Aplodactylus lophodon</i> (Günther, 1859)	S			P		U		222
<b>Cheilodactylidae</b>								
<i>Cheilodactylus fuscus</i> Castelnau, 1879	V	S	P	P		C		
<i>Cheilodactylus vestitus</i> (Castelnau, 1878)	S	S	S	P		A		
<i>Nemadactylus douglasii</i> (Hector 1875)					S	U	North	223
<b>Cepolidae</b>								
<i>Acanthocephala krusensternii</i> Schlegel, 1850	S					C	South	
<b>Labridae</b>								
<i>Achoerodus viridis</i> (Steindachner, 1866)	V	V	V	P		U		
<i>Anampses caeruleopunctatus</i> Rüppell, 1829	V	S	P	V		C		
<i>Anampses feminius</i> Randall, 1972		P				U	North	P
<i>Anampses geographicus</i> Valenciennes, 1840	S	V	V	S		C		
<i>Anampses neoguinaicus</i> Bleeker, 1878		S	P			C		
<i>Austrolabrus maculatus</i> (Macleay, 1881)			S			U		
<i>Bodianus axillaris</i> (Bennett, 1832)		S	V	P		C		
<i>Bodianus bilunulatus</i> (Lacepède, 1802)		S				R	East	224
<i>Bodianus dictynna</i> Gomon, 2006		P	P			R	South	
<i>Bodianus frenchii</i> (Klunzinger, 1880)		V				U		225
<i>Bodianus perdilio</i> (Quoy & Gaimard, 1835)	S	S	P	P	P	C		
<i>Bodianus unimaculatus</i> (Günther, 1862)					S	C		226
<i>Bodianus</i> sp. 1		P				R	?	227
<i>Cheilinus chlorourus</i> (Bloch, 1791)	S		V	P		U	South	228
<i>Cheilinus trilobatus</i> Lacepède, 1801	V	S				C	South	229
<i>Cheilinus undulatus</i> Rüppell, 1835			V			R	South	230

## Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Cheilio inermis</i> (Forsskål, 1775)	S		V	S		C		
<i>Choerodon cephalotes</i> (Castelnau, 1875)	S		P	S		C		
<i>Choerodon fasciatus</i> (Günther, 1867)	S	S	S			C		
<i>Choerodon frenatus</i> Ogilby, 1910					S	C		
<i>Choerodon graphicus</i> (De Vis, 1885)	S	V	V	S		C		
<i>Choerodon jordani</i> (Snyder, 1908)		P	P			R	South	231
<i>Choerodon schoenleinii</i> (Valenciennes, 1839)	S	V	V	P		C		
<i>Choerodon venustus</i> (De Vis, 1884)	S	S	P		P	C		
<i>Cirrhilabrus punctatus</i> Randall & Kuitert, 1989	S	S	S	P		A		
<i>Coris aurilineata</i> Randall & Kuitert, 1982	S					C		
<i>Coris aygula</i> (Lacepède, 1801)		P		V		U		
<i>Coris batueensis</i> (Bleeker, 1856)	S	P	S			C		
<i>Coris dorsomacula</i> Fowler, 1908		S	P			C		
<i>Coris gaimard</i> (Quoy & Gaimard, 1824)			S			R		232
<i>Coris picta</i> (Bloch & Schneider, 1801)	S	S	S			C		
<i>Coris pictoides</i> Randall & Kuitert, 1982	P					U		
<i>Epibulus insidiator</i> (Pallas, 1770)		V				R	South	233
<i>Gomphosus varius</i> Lacepède, 1801		S	V			C	South	P
<i>Halichoeres biocellatus</i> Schultz, 1960		V				R		
<i>Halichoeres chrysurus</i> Randall, 1981			V			R		
<i>Halichoeres hartzfeldii</i> (Bleeker, 1852)	S	V		P		U		
<i>Halichoeres hortulanus</i> (Lacepède, 1801)		V	S			C		
<i>Halichoeres margaritaceus</i> (Valenciennes, 1839)	V	S	S	P		C		
<i>Halichoeres marginatus</i> Rüppell, 1835	S	S	V	P		C		
<i>Halichoeres melanurus</i> (Bleeker, 1851)	V	P				U	South	P
<i>Halichoeres nebulosus</i> (Valenciennes, 1839)	V	S	P			C		
<i>Halichoeres trimaculatus</i> (Quoy & Gaimard, 1834)	V	V		P		C	South	P
<i>Hemigymnus fasciatus</i> (Bloch, 1792)	S	P	V			C		
<i>Hemigymnus melapterus</i> (Bloch, 1791)	S	P	P			C		
<i>Hologymnosus annulatus</i> (Lacepède, 1801)		S	V			C		
<i>Hologymnosus longipes</i> (Günther, 1862)		S				U	South	234
<i>Iniistius jacksouensis</i> (Ramsay, 1881)	S			V		U		
<i>Iniistius pavo</i> (Valenciennes, 1840)		S				R		235
<i>Labrichthys unilineatus</i> (Guichenot, 1847)		P				U	South	
<i>Labroides bicolor</i> Fowler & Bean, 1928		V				U	South	
<i>Labroides dimidiatus</i> (Valenciennes, 1839)	S	S	S	S		A		
<i>Labropsis australis</i> Randall, 1981		P				U	South	
<i>Labropsis xanthonota</i> Randall, 1981	V					R	South	236
<i>Leptojulius cyanopleura</i> (Bleeker, 1853)				P		U		
<i>Macropharyngodon choati</i> Randall, 1978		P				U		
<i>Macropharyngodon meleagris</i> (Valenciennes, 1839)		P	V			C		
<i>Macropharyngodon negrosensis</i> Herre, 1932		P	V			C		

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Notolabrus gymnogenis</i> (Günther, 1862)	S	V	S	S		C		
<i>Novaculichthys taeniourus</i> (Lacepède, 1801)		P				U		
<i>Novaculooides macrolepidotus</i> (Bloch, 1791)				P		R		
<i>Ophthalmolepis lineolatus</i> (Valenciennes, 1839)					S	R	North	237
<i>Oxycheilinus bimaculatus</i> (Valenciennes, 1840)	S		P	P		C		
<i>Oxycheilinus diagrammus</i> (Lacepède, 1801)		P				R	South	
<i>Pseudocheilinus hexataenia</i> (Bleeker, 1857)		V	S			U	South	238
<i>Pseudojuloides elongatus</i> Ayling & Russell, 1977		P				U	North	
<i>Pseudolabrus guentheri</i> Bleeker, 1862	S	S	S	S		A		
<i>Pteragogus enneacanthus</i> (Bleeker, 1853)	S	P	P	S		C		
<i>Pteragogus flagellifer</i> (Valenciennes, 1839)	S			S		C	South	
<i>Stethojulis bandanensis</i> (Bleeker, 1851)	V	S	S	P		C		
<i>Stethojulis interrupta</i> (Bleeker, 1851)	S		S	P		C		
<i>Stethojulis strigiventer</i> (Bennett, 1832)	S			P		C		
<i>Suezichthys arquatus</i> Russell, 1985		V	S			U		
<i>Suezichthys devisi</i> (Whitley, 1941)	V			P		C		
<i>Thalassoma amblycephalum</i> (Bleeker, 1856)	V	S	S	P		C		
<i>Thalassoma hardwicke</i> (Bennett, 1828)	S	P				C		
<i>Thalassoma lunare</i> (Linnaeus, 1758)	S	S	S	S		A		
<i>Thalassoma lutescens</i> (Lay & Bennett, 1839)	S	S	S	S		A		
<i>Thalassoma nigrofasciatum</i> Randall, 2003	S	S	V	P		C		239
<i>Thalassoma purpureum</i> (Forsskål, 1775)	S	S	S	S		C		
<i>Thalassoma trilobatum</i> (Lacepède, 1801)	V	S	S	P		C		
<b>Scaridae</b>								
<i>Calotomus carolinus</i> (Valenciennes, 1840)	V	S		V		U		240
<i>Cetoscarus bicolor</i> (Rüppell, 1829)		V				R	South	
<i>Chlorurus microrlinus</i> (Bleeker, 1854)	V	S	S			C		
<i>Chlorurus sordidus</i> Forsskål, 1775		P				C	South	P
<i>Leptoscarus vaigiensis</i> (Quoy & Gaimard, 1824)	S			S		C		
<i>Scarus altipinnis</i> (Steindachner, 1879)		S				U		241
<i>Scarus chameleon</i> Choat & Randall, 1986		S	P			C		
<i>Scarus forsteni</i> (Bleeker, 1861)		P				R		242
<i>Scarus frenatus</i> Lacepède, 1802		S		P		C	South	243
<i>Scarus ghobban</i> Forsskål, 1775	S	V	V	P		A		
<i>Scarus niger</i> Forsskål, 1775		P				R	South	244
<i>Scarus rivulatus</i> Valenciennes, 1840	V	V				C	South	
<i>Scarus rubroviolaceus</i> Bleeker, 1847		P				C		245
<b>Cichlidae</b>								
<i>Oreochromis mossambica</i> (Peters, 1852)	S					C	South	246
<b>Pomacentridae</b>								
<i>Abudefduf bengalensis</i> (Bloch, 1787)	S	V	V	P		A		
<i>Abudefduf sexfasciatus</i> (Lacepède, 1801)	S	V	V	P		C		
<i>Abudefduf sordidus</i> (Forsskål, 1775)	V	V	S	P		C		



Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Abudefduf vaigiensis</i> (Quoy & Gaimard, 1825)	S	S	S	P		C		
<i>Abudefduf whitleyi</i> Allen & Robertson, 1974	S			P		C		
<i>Amblyglyphidodon curacao</i> (Bloch, 1787)		P				C	South	P
<i>Amphiprion akindynos</i> Allen, 1972	S	P	S	P		C		
<i>Amphiprion latezonatus</i> Waite, 1900	S		P			R		P; 247
<i>Chromis abyssicola</i> Allen & Randall, 1985					S	C		
<i>Chromis atripectoralis</i> Welander & Schultz, 1951	V	P				C	South	P
<i>Chromis chrysurus</i> (Bliss, 1883)	P					U		
<i>Chromis flavomaculata</i> Kamohara, 1960			P			U		
<i>Chromis hypsilepis</i> (Günther, 1876)	V		V	V		U	North	
<i>Chromis margaritifer</i> Fowler, 1946	V	S	S	S		C		
<i>Chromis nitida</i> (Whitley, 1928)	V	V	V	P		A		
<i>Chromis vanderbilti</i> (Fowler, 1941)		S	S			C		
<i>Chromis weberi</i> Fowler & Bean, 1928		P	V			C		
<i>Chrysiptera brownriggii</i> (Bennett, 1828)		S				U		248
<i>Chrysiptera cyanea</i> (Quoy & Gaimard, 1824)	S					U		
<i>Chrysiptera flavipinnis</i> (Allen & Robertson, 1974)	S	S	S	P		C		
<i>Chrysiptera glauca</i> (Cuvier, 1830)	S					U		249
<i>Chrysiptera taupou</i> (Jordan & Seale, 1906)	V					R	South	
<i>Dascyllus aruanus</i> (Linnaeus, 1758)	P	V	V			C		
<i>Dascyllus melanurus</i> Bleeker, 1854	S					R	South	250
<i>Dascyllus reticulatus</i> (Richardson, 1846)	V	S	S			C	South	251
<i>Dascyllus trimaculatus</i> (Rüppell, 1828)	S	S	S	P		C		
<i>Mecaenichthys immaculatus</i> (Ogilby, 1885)	V	S				U		252
<i>Neopomacentrus azysron</i> (Bleeker, 1877)		P		P		U		
<i>Neopomacentrus bankieri</i> (Richardson, 1845)	S			P		C		
<i>Neopomacentrus cyanomos</i> (Bleeker, 1856)	S			P		U		
<i>Parma oligolepis</i> Whitley, 1929	S	S	S	P		A		
<i>Parma polylepis</i> Günther, 1862	V	S	V	P		C		
<i>Parma unifasciata</i> (Steindachner, 1867)	V	P	P	V		C		
<i>Plectroglyphidodon dickii</i> (Liénard, 1839)	P	S	S			C	South	
<i>Plectroglyphidodon johnstonianus</i> Fowler & Ball, 1924		S	V			C		
<i>Plectroglyphidodon lacrymatus</i> (Quoy & Gaimard, 1825)		P	V			C		
<i>Plectroglyphidodon leucozonus</i> (Bleeker, 1859)	S	S	S	S		A		
<i>Pomacentrus amboinensis</i> Bleeker, 1868	S	P	V	P		C		
<i>Pomacentrus australis</i> Allen & Robertson, 1973	S	V	S	P		C		
<i>Pomacentrus bankanensis</i> Bleeker, 1853	V	S	S	P		C		
<i>Pomacentrus brachialis</i> Cuvier, 1830	S		S			U	South	253
<i>Pomacentrus chrysurus</i> Cuvier, 1830		S				U		
<i>Pomacentrus coelestis</i> Jordan & Starks, 1901	S	P	S	P		C		
<i>Pomacentrus lepidogenys</i> Fowler & Ball, 1928		S	S			C	South	254
<i>Pomacentrus moluccensis</i> Bleeker, 1853	S	S	S			C	South	255

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Pomacentrus nagasakiensis</i> Tanaka, 1909	S	V	S	P		C		
<i>Pomacentrus pavo</i> (Bloch, 1787)		P				U?		256
<i>Pomacentrus vaiulu</i> Jordan & Seale, 1906		S				U	South	257
<i>Pomacentrus wardi</i> Whitley, 1927	S	S	S	V		C		
<i>Pristotis obtusirostris</i> (Günther, 1862)			V	P	P	C		
<i>Stegastes apicalis</i> (De Vis, 1885)	V	V	S	S		C		
<i>Stegastes fasciolatus</i> (Ogilby, 1899)		V				U		
<i>Stegastes gascoynei</i> (Whitley, 1964)	S	S	S	S		A		
<b>Champsodontidae</b>								
<i>Champsodon nudivittis</i> (Ogilby, 1895)					S	C		
<b>Pinguipedidae</b>								
<i>Parapercis australis</i> Randall, 2003	S	P	S	P		C		
<i>Parapercis binivirgata</i> (Waite, 1904)					S	U		
<i>Parapercis clathrata</i> Ogilby, 1911		P				R	South	P
<i>Parapercis diplospilus</i> Gomon, 1981	S					U		
<i>Parapercis millepunctata</i> (Günther, 1860)		P				R	South	P
<i>Parapercis nebulosa</i> (Quoy & Gaimard, 1825)	S			S	S	A		
<i>Parapercis queenslandica</i> Imamura & Yoshino, 2007		S	S	P		C		
<i>Parapercis sexlorata</i> Johnson, 2006					S	R	North	258
<i>Parapercis stricticeps</i> (De Vis, 1884)	S	S	V	P		C		
<i>Parapercis</i> sp. 1					S	C		259
<i>Simipercis trispinosa</i> Johnson, 2006					P	U		260
<b>Trichonotidae</b>								
<i>Trichonotus setiger</i> Bloch & Schneider, 1801		S		P		U	South	P; 261
<b>Creediidae</b>								
<i>Linnichthys nitidus</i> Smith, 1958			S			R		
<i>Schizochirus insolens</i> Waite, 1904	S					C		
<b>Percophidae</b>								
<i>Acauthaphritis barbata</i> (Okamura & Kishida, 1963)					S	R		
<i>Matsubaraea fusiforme</i> (Fowler, 1943)	S					U	South	
<b>Leptoscopidae</b>								
<i>Lesueurina platycephala</i> Fowler, 1907	S		S			C		
<b>Ammodytidae</b>								
<i>Ammodytoides vagus</i> (McCulloch & Waite, 1916)	S					U		
<b>Uranoscopidae</b>								
<i>Ichthyoscopus samuio</i> Whitley, 1936	S			S		C		
<i>Ichthyoscopus nigripinnis</i> Gomon & Johnson, 1999	S				S	C		
<i>Uranoscopus terraereginae</i> Ogilby, 1910					S	C		262
<i>Uranoscopus</i> sp. 1					S	C		263
<b>Tripterygiidae</b>								
<i>Ceratobregma helenae</i> Holleman, 1987			S			R	South	264
<i>Enneapterygius atrogulare</i> (Günther, 1873)	S	S	S	S		A		
<i>Enneapterygius nanus</i> (Schultz, 1960)		S				U	South	265

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FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Enneapterygius similis</i> Fricke, 1997		S	S	S		A		266
<i>Enneapterygius tutuilae</i> Jordan & Seale, 1906	S					U	South	267
<i>Enneapterygius</i> sp. 1		S				R	South?	P; 268
<i>Helcogramma</i> sp. 1		S				U	South?	P; 269
<i>Lepidoblennius haplodactylus</i> Steindachner, 1867	S					R	North	270
<i>Norfolkia squamiceps</i> (McCulloch & Waite, 1916)	S	S	S	S		A		271
<i>Norfolkia thomasi</i> Whitley, 1964			S			R		272
<i>Ucla xenogrammus</i> Holleman, 1993	S					R	South	273
<b>Clinidae</b>								
<i>Cristiceps aurantiacus</i> Castelnau, 1879				S		R	North	274
<i>Heteroclinus whiteleggii</i> (Ogilby, 1894)			S			U		
<i>Heteroclinus</i> sp. 1	S					R	North	275
<b>Blennidae</b>								
<i>Aspidontus dussumieri</i> (Valenciennes, 1836)		P				U		
<i>Blenniella chrysospilos</i> (Bleeker, 1857)		S				R	South	276
<i>Blenniella paula</i> (Bryan & Herre, 1903)		S				R	South	277
<i>Cirripectes castaneus</i> (Valenciennes, 1836)			S			U		
<i>Cirripectes stigmaticus</i> Strasburg & Schultz, 1953			S			U	South	278
<i>Ecsenius bicolor</i> (Day, 1888)			S			U	South	279
<i>Ecsenius stictus</i> Springer, 1988			S			U	South	280
<i>Entomacrodus striatus</i> (Valenciennes, 1836)			S			R	South	281
<i>Exallias brevis</i> (Kner, 1868)		S	P			U		
<i>Istiblennius edentulus</i> (Schneider, 1801)	S	S	S	P		C		
<i>Istiblennius meleagris</i> (Valenciennes, 1836)	S	V	S	S		A		
<i>Laiphognathus multimaculatus</i> Smith, 1955	S		S	S		C		
<i>Meiacanthus atrodorsalis</i> (Günther, 1877)				P		R		
<i>Meiacanthus lineatus</i> (De Vis, 1884)	S					C		
<i>Omobranchus anolius</i> (Valenciennes, 1836)	S					C		
<i>Omobranchus punctatus</i> (Valenciennes, 1836)	S					C	South	
<i>Omobranchus rotundiceps rotundiceps</i> (Macleay, 1881)	S					A		
<i>Omobranchus verticalis</i> Springer & Gomon, 1975	S					R	South	282
<i>Parablennius intermedius</i> (Ogilby, 1915)	S	S	S	S		A		
<i>Petroscirtes fallax</i> Smith-Vaniz, 1976	S			P		C		
<i>Petroscirtes lupus</i> (De Vis, 1886)	S			P		A		
<i>Petroscirtes mitratus</i> Rüppell, 1830				P		R	South	P
<i>Plagiotremus rhinorhynchus</i> (Bleeker, 1852)	S		S	P		C		
<i>Plagiotremus tapeinosoma</i> (Bleeker, 1857)	S	P	S	P		C		
<i>Xiphasia setifer</i> Swainson, 1839	S		S			U		
<b>Gobiesocidae</b>								
<i>Lepadichthys caritus</i> Briggs, 1969			S			R		
<i>Lepadichthys frenatus</i> Waite, 1904	S		S			U		
<b>Callionymidae</b>								
<i>Bathycallionymus moretonensis</i> (Johnson, 1971)					S	A		



FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Calliurichthys cf australis</i> (Fricke, 1983)					S	U		283
<i>Calliurichthys grossi</i> (Ogilby, 1910)	S				S	C	South	
<i>Calliurichthys ogilbyi</i> (Fricke, 2002)					S	A		
<i>Dactylopus dactylopus</i> (Valenciennes, 1837)	S			P	S	C		
<i>Eocallionymus papilio</i> (Günther, 1864)				S		R		284
<i>Foetorepus calauroponus</i> (Richardson, 1844)					S	A	North	
<i>Neosynchiropus ocellatus</i> (Pallas, 1770)	S		S			U		
<i>Repomucenus belcheri</i> (Richardson, 1844)	S					C	South	
<i>Repomucenus calcaratus</i> (Macleay, 1881)	S			P	S	A		
<i>Repomucenus limiceps</i> (Ogilby, 1908)	S				S	A		
<i>Repomucenus macdonaldi</i> (Ogilby, 1911)	S			S		C		
<i>Repomucenus russelli</i> (Johnson, 1976)	S			S		C		
<i>Repomucenus sublaevis</i> (McCulloch, 1926)	S					C		
<i>Orbonymus rameus</i> (McCulloch, 1926)					S	U		
<i>Spinicapitichthys draconis</i> (Nakabo, 1977)					S	C	East	285
<b>Eleotridae</b>								
<i>Butis butis</i> (Hamilton-Buchanan, 1822)	S					C		
<i>Butis koilomatodon</i> (Bleeker, 1849)	S					R	South	286
<i>Eleotris melanosoma</i> Bleeker, 1852	S					R	South	287
<i>Opliocara porocephala</i> (Valenciennes, 1837)	P					R	South	288
<i>Prionobutis microps</i> (Weber, 1908)	S					U	South	
<b>Gobiidae</b>								
<i>Acentrogobius caninus</i> (Cuvier & Valenciennes, 1837)	S					U	South	289
<i>Afurcagobius tamarensis</i> (Johnston, 1883)	L					R		290
<i>Amblyeleotris callopareia</i> Polunin & Lubbock, 1979	S					R	South	291
<i>Amblyeleotris wheeleri</i> (Polunin & Lubbock, 1977)		P				R	South	P
<i>Amblygobius phalaena</i> (Valenciennes, 1837)	S			P		U		
<i>Amoya</i> sp. 1	S					U	South?	292
<i>Arenigobius frenatus</i> (Günther, 1861)	S					C		
<i>Arenigobius leftwichi</i> (Ogilby, 1910)	S					C		
<i>Asterropteryx semipunctatus</i> Rüppell, 1830				P		U		P
<i>Austrolethops wardi</i> Whitley, 1935	S					R	South	
<i>Bathygobius cocosensis</i> (Bleeker, 1854)	S	S	S	S		A		
<i>Bathygobius kreftii</i> (Steindachner, 1866)	S			P		A		
<i>Bathygobius laddi</i> (Fowler, 1931)	S		S	S		C		
<i>Callogobius depressus</i> (Ramsay & Ogilby, 1886)	S					U	North	
<i>Callogobius sclateri</i> (Steindachner, 1879)			S			R	South	293
<i>Callogobius</i> sp. 1	S			S		C		294
<i>Caragobius urolepis</i> (Bleeker, 1852)	S					U	South	295
<i>Caragobius</i> sp. 1	S					C	South	296
<i>Cryptocentroides gobioides</i> (Ogilby, 1886)	S			S		C		
<i>Cryptocentrus</i> sp. 1	S					R		297

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FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Drombus triangularis</i> (Weber, 1911)	S					C	South	
<i>Eugnathogobius polylepis</i> (Wu & Ni, 1985)	S					U	South	298
<i>Eviota guttata</i> Lachner & Karnella, 1978		S	S	S		C		299
<i>Eviota nebulosa</i> Smith, 1958			S			C	South	300
<i>Eviota prasina</i> (Klunzinger, 1871)		S	S			C	South	301
<i>Favonigobius exquisitus</i> Whitley, 1950	S			P		A		
<i>Favonigobius lentiginosus</i> (Richardson, 1844)	S			P		A		
<i>Flabelligobius</i> sp. 1	S					U		302
<i>Fusigobius inframaculatus</i> (Randall, 1994)			S			R	South	303
<i>Fusigobius neophytus</i> (Günther, 1877)	S			P		C		
<i>Gnatholepis cauerensis</i> (Bleeker, 1853)			S	P		C		
<i>Gnatholepis gymnocara</i> Randall & Greenfield, 2001	S					C	South	304
<i>Gobiodon citrinus</i> (Rüppell, 1838)		V				R	South	
<i>Gobiodon quinquestrigatus</i> (Valenciennes, 1837)	S		S			U	South	305
<i>Gobiodon rivulatus</i> (Rüppell, 1830)			S			R	South	306
<i>Gobiopterus semivestita</i> (Munro, 1949)	S					C		
<i>Istigobius decoratus</i> (Herre, 1927)	S	P	S	P		C		307
<i>Istigobius nigroocellatus</i> (Günther, 1874)	S			S		C		
<i>Lubricogobius ornatus</i> Fourmanoir, 1966					S	R		308
<i>Mugilogobius platynotus</i> (Günther, 1861)	S					U	North	
<i>Mugilogobius stigmaticus</i> (De Vis, 1884)	S					A		
<i>Oxyurichthys cornutus</i> McCulloch & Waite, 1918	S					R	South	309
<i>Pandaka lidwilli</i> (McCulloch, 1917)	S					C		
<i>Parachaeturichthys polynema</i> (Bleeker, 1853)	S					U	South	
<i>Paratrypauchen microcephalus</i> (Bleeker, 1860)	S					C	South	310
<i>Parkraemeria ornata</i> Whitley, 1951	S					U		
<i>Periophthalmus argentilineatus</i> Valenciennes, 1837	S					R	South	311
<i>Pleurosicya mossambica</i> Smith, 1959		S				R		312
<i>Priolepis cincta</i> (Regan, 1908)	S	S	S			C		
<i>Priolepis fallacincta</i> Winterbottom & Burrige, 1992	S					R	South	313
<i>Priolepis nuchifasciata</i> (Günther, 1873)	S		S			C		
<i>Priolepis</i> sp. 1			S			R		314
<i>Psammogobius biocellatus</i> (Valenciennes, 1837)	S			P		U		
<i>Pseudogobius</i> sp. 1	S					A		
<i>Redigobius bikolanus</i> (Herre, 1927)	S					C		
<i>Redigobius macrostoma</i> (Günther, 1861)	S					C		
<i>Redigobius nanus</i> Larson, 2010	S					U	South	
<i>Scartelaos histiophorus</i> (Valenciennes, 1837)	S					U	South	
<i>Sillionettea evanida</i> Larson & Miller, 1985	S					R	South	315
<i>Taenioides purpurascens</i> (De Vis, 1884)	S					U		
<i>Trinmma necopina</i> Whitley, 1959	S	S	S			U		
<i>Valenciennea immaculata</i> (Ni, 1981)	S					C		

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Valenciennesa strigata</i> (Broussonet, 1782)		P				U		
<i>Vanderhorstia ornatissima</i> Smith, 1959				P		R	South	P
<b>Microdesmidae</b>								
<i>Ptereleotris lieteroptera</i> (Bleeker, 1855)	S					R		316
<i>Ptereleotris microlepis</i> (Bleeker, 1856)	S					R		317
<b>Ephippidae</b>								
<i>Drepane punctata</i> (Linnaeus, 1758)	S					R	South	318
<i>Platax batavianus</i> Cuvier, 1831	P					R	South	P
<i>Platax orbicularis</i> (Forsskål, 1775)	S					R	South	319
<i>Platax teira</i> (Forsskål, 1775)	S	S	P	P		C		
<i>Zabidius novemaculeatus</i> (McCulloch, 1916)		S				R	South	320
<b>Scatophagidae</b>								
<i>Scatophagus argus</i> (Linnaeus, 1766)	S			P		C		
<i>Selenotoca multifasciata</i> (Richardson, 1846)	S			P		A		
<b>Siganidae</b>								
<i>Siganus argenteus</i> (Quoy & Gaimard, 1825)		S				U	South	321
<i>Siganus doliatus</i> Cuvier, 1830	V					R	South	
<i>Siganus fuscescens</i> (Houttuyn, 1782)	S	P	V	P		A		
<i>Siganus lineatus</i> (Valenciennes, 1835)	S	V				U	South	322
<i>Siganus spinus</i> (Linnaeus, 1758)	V	V	V	P		C	South	
<b>Zanclidae</b>								
<i>Zanclus cornutus</i> (Linnaeus, 1758)	V	S	P	V		C		
<b>Acanthuridae</b>								
<i>Acanthurus blochii</i> Valenciennes, 1835			P	P		U		
<i>Acanthurus dussumieri</i> Valenciennes, 1835	S	V	P	S		A		
<i>Acanthurus grannoptilus</i> Richardson, 1843	S			V		C	South	323
<i>Acanthurus lineatus</i> (Linnaeus, 1758)			P		P	U		
<i>Acanthurus mata</i> Cuvier, 1829			S	P	P	C		
<i>Acanthurus nigricans</i> (Linnaeus, 1758)			S			R	South	324
<i>Acanthurus nigrofuscus</i> (Forsskål, 1775)	S	P	S	S		C		
<i>Acanthurus olivaceus</i> Bloch & Schneider, 1801			P	P	P	U		
<i>Acanthurus pyroferus</i> Kittlitz, 1834			V		P	R		
<i>Acanthurus triostegus</i> (Linnaeus, 1758)	S	S	S	P		C		
<i>Acanthurus xanthopterus</i> Valenciennes, 1835	S	V	V	S		C		
<i>Ctenochaetus striatus</i> (Quoy & Gaimard, 1825)			V		S	U	South	325
<i>Naso annulatus</i> (Quoy & Gaimard, 1825)	S	V	V	P		C	South	326
<i>Naso brevirostris</i> (Cuvier, 1829)			P			R		
<i>Naso hexacanthus</i> Bleeker, 1855			S			R	South	327
<i>Naso lituratus</i> (Bloch & Schneider, 1801)			P	P		R	South	
<i>Naso maculatus</i> Randall & Struhsaker, 1981				S		U	South	328
<i>Naso mcdadei</i> Johnson, 2002				S		U	South	
<i>Naso tonganus</i> (Valenciennes, 1835)			V	S		C		
<i>Naso unicornis</i> (Forsskål, 1775)	S	S	V	S		C		



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FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Naso vlamingii</i> (Valenciennes, 1835)		S				R	South	329
<i>Paracanthurus hepatus</i> (Linnaeus, 1766)		S	P			C		
<i>Prionurus maculatus</i> Ogilby, 1887	S	S	S	P		A		
<i>Prionurus microlepidotus</i> Lacepède, 1804	S	S	V	P		A		
<i>Zebrasona scopas</i> (Cuvier, 1829)		P	V	P		C	South	P
<i>Zebrasona veliferum</i> (Bloch, 1797)	S	V	V			U		
<b>Sphyraenidae</b>								
<i>Sphyraena acutipinnis</i> Day, 1876					S	U		
<i>Sphyraena barracuda</i> Walbaum, 1792	S			P		C		
<i>Sphyraena helleri</i> Jenkins, 1901		S				R	South	330
<i>Sphyraena jello</i> Cuvier, 1829	S	V		P		C		
<i>Sphyraena obtusata</i> Cuvier, 1829	S	P	V	P		A		
<i>Sphyraena pinguis</i> Günther, 1874	S					U		
<i>Sphyraena putnamae</i> Jordan & Seale, 1905	S	V	V			C	South	331
<i>Sphyraena qenie</i> Klunzinger, 1870		S				U	South	332
<b>Trichiuridae</b>								
<i>Trichiurus lepturus</i> Linnaeus, 1758	S			S	S	C		
<b>Scombridae</b>								
<i>Acanthocybium solandri</i> (Cuvier, 1831)	S	P	P			C		
<i>Auxis thazard</i> (Lacepède, 1800)		S			S	C		
<i>Cybiosarda elegans</i> (Whitley, 1935)	S	V			S	A		
<i>Enthynnus affinis</i> (Cantor, 1849)		P	S		S	C		
<i>Gasterochisma melampyrgus</i> Richardson, 1845					S	R		333
<i>Grammatorcynus bicarinatus</i> (Quoy & Gaimard, 1824)	V	V	S			C		
<i>Gymnosarda unicolor</i> (Rüppell, 1836)		S				R	South	334
<i>Katsuwonus pelamis</i> (Linnaeus, 1775)					P	C		
<i>Rastrelliger kanagurta</i> (Cuvier, 1817)	S				P	U	South	335
<i>Sarda australis</i> (Macleay, 1881)	P	S	S	P	S	C		
<i>Scomber australasicus</i> Cuvier, 1831	S			P	S	C		
<i>Scomberomorus commerson</i> (Lacepède, 1800)	S	P	P	S	P	C		
<i>Scomberomorus muuroi</i> Collette & Russo, 1980	S				P	C		
<i>Scomberomorus queenslandicus</i> Munro, 1943	S	V				A		
<i>Scomberomorus semifasciatus</i> (Macleay, 1884)	S					U		
<i>Thunnus albacares</i> (Bonnaterre, 1788)		S				C		
<i>Thunnus maccoyii</i> (Castelnau, 1872)					S	U		
<i>Thunnus tonggol</i> (Bleeker, 1851)	S					A		
<b>Istiophoridae</b>								
<i>Istiophorus platypterus</i> (Shaw, 1792)	S	S	P		S	C		
<i>Makaira indica</i> (Cuvier, 1832)	S				P	C		
<i>Makaira nigricans</i> Lacepède, 1802					P	C		
<i>Tetrapturus angustirostris</i> Tanaka, 1915					P	U		
<i>Tetrapturus audax</i> (Philippi, 1887)					P	U		
<b>Xiphiidae</b>								

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Xiphias gladius</i> Linnaeus, 1758					P	R		336
<b>Centrolophidae</b>								
<i>Schedophilus maculatus</i> Günther, 1860	S					R		
<b>Nomeidae</b>								
<i>Cubiceps whiteleggii</i> (Waite, 1894)	S		S		P	U		337
<i>Nomeus gronovii</i> (Gmelin, 1788)	S					U		
<i>Psenes hillii</i> Ogilby, 1915	S		S			U		
<b>Ariommatidae</b>								
<i>Ariomma lurida</i> Jordan & Snyder, 1904					S	C		
<b>Bothidae</b>								
<i>Arnoglossus fisoni</i> Ogilby, 1898	S				S	C		
<i>Arnoglossus dalgleishi</i> (Von Bonde, 1922)					S	U	NAR	338
<i>Arnoglossus waitei</i> Norman, 1926	S				S	C	South	
<i>Asterorhombus intermedius</i> (Bleeker, 1866)					P	R	South	
<i>Bothus maucus</i> (Broussonet, 1782)				P		R		
<i>Bothus myriaster</i> Temminck & Schlegel, 1846					S	R		339
<i>Bothus pantherinus</i> (Rüppell, 1830)				P		R		
<i>Crossorhombus valderostratus</i> (Alcock, 1890)					S	C		
<i>Engyprosopon grandisquama</i> (Schlegel, 1846)	S				P	C		
<i>Engyprosopon maldivensis</i> (Regan, 1908)					S	C		
<i>Engyprosopon longipterum</i> Amaoka, Mihara & Rivaton, 1993					S	C		
<i>Grammatobothus pennatus</i> (Ogilby, 1913)	S				S	C		340
<i>Grammatobothus polyophthalmus</i> (Bleeker, 1866)					P	U		
<i>Lophonectes gallus</i> Günther, 1880	S				S	C		
<i>Parabothus kiensis</i> (Tanaka, 1918)					S	R	South	341
<i>Psettina gigantea</i> Amaoka, 1963					S	C		
<i>Psettina iijimae</i> (Jordan & Starks, 1904)					S	U		
<b>Paralichthyidae</b>								
<i>Pseudorhombus arsius</i> (Hamilton, 1822)	S			P		A		
<i>Pseudorhombus duplici-cellatus</i> Regan, 1905					P	C		
<i>Pseudorhombus elevatus</i> Ogilby, 1912	S					R	South	342
<i>Pseudorhombus jenynsii</i> (Bleeker, 1855)	S			P	S	A		
<i>Pseudorhombus tenuirastrum</i> (Waite, 1899)					S	C		
<b>Samaridae</b>								
<i>Plagiopsetta glossa</i> Franz, 1910					S	C		
<i>Samariscus triocellatus</i> Woods, 1966			S			R		343
<b>Soleidae</b>								
<i>Aesopia cornuta</i> Kaup, 1858					S	R		344
<i>Aseraggodes melanostictus</i> (Peters, 1877)					S	U	South	345
<i>Aseraggodes nigrocirratu</i> s Randall, 2005	S					R	North	346
<i>Aseraggodes normani</i> Chabanaud, 1930	S				P	U		
<i>Brachirus nigra</i> (Macleay, 1880)	S			P		C		
<i>Dexillus muelleri</i> (Steindachner, 1879)	S					R	South	347

## Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Pardalichthys hedleyi</i> Ogilby, 1916	S		S	S	S	C		
<i>Phyllichthys sclerolepis</i> (Macleay, 1878)	S					R	South	348
<i>Soleichthys microcephalus</i> (Günther, 1862)	S			P		U		
<i>Synclidopus macleanianus</i> (Ramsay, 1881)	S				S	C		
<i>Zebrias scalaris</i> Gomon, 1987	S				S	U		
<b>Cynoglossidae</b>								
<i>Cynoglossus bilineatus</i> (Lacepède, 1802)	L				P	U	South	349
<i>Cynoglossus maccullochi</i> Norman, 1926	S					U	South	350
<i>Cynoglossus maculipinnis</i> Rendahl, 1921	S				S	C		
<i>Cynoglossus</i> sp. 1	S					U	?	351
<i>Cynoglossus</i> sp. 2	S					U	?	352
<i>Cynoglossus</i> sp. 3	S					U	?	353
<i>Cynoglossus</i> sp. 4					S	U	?	354
<i>Paraplagusia bilineata</i> (Bloch, 1787)	S				S	C		
<i>Paraplagusia sinerama</i> Chapleau & Renaud, 1993	S				S	C	South	355
<i>Paraplagusia unicolor</i> (Macleay, 1881)	S				S	C		356
<b>Triacanthodidae</b>								
<i>Triacanthodes ethiops</i> Alcock, 1894					P	U		357
<b>Triacanthidae</b>								
<i>Tripodichthys angustifrons</i> (Hollard, 1854)	S					C		358
<b>Balistidae</b>								
<i>Abalistes stellatus</i> (Anonymous, 1798)	S		S	P	P	U		
<i>Balistapus undulatus</i> (Park, 1797)	S					R	South	359
<i>Balistoides conspicillum</i> (Bloch & Schneider, 1801)		S	S			C		
<i>Canthiudermis unculatus</i> (Bloch, 1786)	S				S	R		
<i>Melichthys vidua</i> (Richardson, 1845)		S				C	South	360
<i>Pseudobalistes flavimarginatus</i> (Rüppell, 1829)		V		P		U		
<i>Pseudobalistes fuscus</i> (Bloch & Schneider, 1801)		S	P	P		U		
<i>Rhinecanthus lunula</i> Randall & Steene, 1983		P				R		P
<i>Rhinecanthus rectangulus</i> (Bloch & Schneider, 1801)			V			U		
<i>Sufflamen bursa</i> (Bloch & Schneider, 1801)		P				R		
<i>Sufflamen chrysopterum</i> (Bloch & Schneider, 1801)	S	P	V	P		C		
<i>Sufflamen fraenatus</i> (Latreille, 1804)	S	S	P		P	C		
<b>Monacanthidae</b>								
<i>Aluterus monoceros</i> (Linnaeus, 1758)		S	S	P		C		
<i>Aluterus scriptus</i> (Osbeck, 1765)		P	V			U		
<i>Anacanthus barbatus</i> Gray, 1831	S			P	S	C	South	361
<i>Brachaluteres jacksonianus</i> (Quoy & Gaimard, 1824)	S			S		C	North	
<i>Cantherhines dumerilii</i> (Hollard, 1854)		S	S			U		
<i>Cantherhines fronticinctus</i> (Günther, 1866)		P	P			U		P
<i>Cantherhines pardalis</i> (Rüppell, 1837)	S	S	S	P		C		
<i>Cantheschenia grandisquamis</i> Hutchins, 1977	S	S	P	P		C		
<i>Chaetodermis penicilligerus</i> (Cuvier, 1816)	S			P		C		



FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Eubalichthys mosaicus</i> (Ramsay & Ogilby, 1886)	S	V			S	U		
<i>Meuschenia trachylepis</i> (Günther, 1870)	S	V	P	P		C		
<i>Monacanthus chinensis</i> (Osbeck, 1765)	S		V	P		A		
<i>Nelusetta ayraudi</i> (Quoy & Gaimard, 1824)	S				S	C	North	
<i>Oxymonacanthus longirostris</i> Bloch & Schneider, 1801		P				U	South	
<i>Paraluteres prionurus</i> (Bleeker, 1851)	S		V	P		U		
<i>Paramonacanthus filicauda</i> (Günther, 1880)	S				S	A		
<i>Paramonacanthus lowei</i> Hutchins, 1997					P	U		
<i>Paramonacanthus otisensis</i> Whitley, 1931	S				S	A		
<i>Pervagor alternans</i> (Ogilby, 1899)		P	P			C		
<i>Pervagor janthinosoma</i> (Bleeker, 1854)	S	S	P	S		C		
<i>Pseudalutarius nasicornis</i> (Temminck & Schlegel, 1850)	S					R		362
<i>Pseudomonacanthus peroni</i> (Hollard, 1854)	S	S	V	S		C	South	P; 363
<i>Thamnaconus hypargyreus</i> (Cope, 1871)					S	U		
<i>Thamnaconus tessellatus</i> (Günther, 1880)					S	C		
<b>Ostraciidae</b>								
<i>Anoplocapros inermis</i> (Fraser-Brunner, 1935)					S	C		364
<i>Lactoria cornuta</i> (Linnaeus, 1758)	S					C		
<i>Lactoria diaphana</i> (Bloch & Schneider, 1801)	S					C		
<i>Lactoria fornasini</i> (Bianconi, 1846)	S					U		
<i>Ostracion cubicus</i> Linnaeus, 1758	S	P	S	P		C		
<i>Ostracion meleagris</i> Shaw, 1796		S		V		R		
<i>Tetrosomus reipublicae</i> (Whitley, 1930)	S		S		S	C		
<i>Tetrosomus gibbosus</i> (Linnaeus, 1758)	S					R	South	365
<b>Tetraodontidae</b>								
<i>Arothron caeruleopunctatus</i> Matsuura, 1994		V				R	South	
<i>Arothron firmamentum</i> (Temminck & Schlegel, 1847)					S	U	North	366
<i>Arothron lispidus</i> (Linnaeus, 1758)	S	V	S	S		C		
<i>Arothron manilensis</i> (de Proce, 1822)	S	V	V	P		C		
<i>Arothron meleagris</i> (Lacepède, 1798)			P			R	South	P
<i>Arothron nigropunctatus</i> (Bloch & Schneider, 1801)	S	P	P			U		
<i>Arothron reticularis</i> (Bloch & Schneider, 1801)				P		R		P; 367
<i>Arothron stellatus</i> (Bloch & Schneider, 1801)	S	V	V	P		C		
<i>Canthigaster amboinensis</i> (Bleeker, 1865)		S				R		
<i>Canthigaster axiologa</i> Whitley, 1931	P		P	P		U		368
<i>Canthigaster bennetti</i> (Bleeker, 1854)	S	P	P	P		C		
<i>Canthigaster callisterna</i> (Ogilby, 1889)	V	V	V	S	S	C		
<i>Canthigaster janthinoptera</i> (Bleeker, 1855)	S	S	S			U		
<i>Canthigaster valentini</i> (Bleeker, 1853)	S	S	S	P		C		
<i>Feroxodon multistriatus</i> (Richardson, 1854)				P	S	U		
<i>Lagocephalus cheesemanii</i> (Clarke, 1897)					S	C		369
<i>Lagocephalus inermis</i> (Temminck & Schegel, 1850)	S					C		

## Checklist of Moreton Bay Fishes

FAMILY/SPECIES	1	2	3	4	5	Abun.	Range	Note
<i>Lagocephalus lunaris</i> (Bloch & Schneider, 1801)	S					C		
<i>Lagocephalus scleratus</i> (Gmelin, 1788)	S				S	C		
<i>Marilyna pleurosticta</i> (Günther, 1871)	S					A		
<i>Reichertia halsteadi</i> (Whitley, 1957)					S	R		370
<i>Sphoeroides pachygaster</i> (Müller & Troschel, 1848)					S	C		
<i>Tetractenos glaber</i> (Fremenville, 1813)	S					R	North	371
<i>Tetractenos hamiltoni</i> (Gray & Richardson, 1843)	S			S		A		
<i>Torquigener altipinnis</i> (Ogilby, 1891)	S				S	C		
<i>Torquigener hicksi</i> Hardy, 1983					S	U	South	
<i>Torquigener perlevis</i> (Ogilby, 1908)	S					C		
<i>Torquigener pleurogramma</i> (Regan, 1903)	S			S		C		
<i>Torquigener squamicanda</i> (Ogilby, 1911)	S			S		A		
<i>Torquigener tuberculiferus</i> (Ogilby, 1912)	S				P	C		
<i>Torquigener whitleyi</i> (Paradice, 1927)	S					C		
<b>Diodontidae</b>								
<i>Chilomycterus reticulatus</i> (Linnaeus, 1758)	V	V	P			U		P
<i>Dicotylichthys punctulatus</i> Kaup, 1855	S	V	V	S	S	C		
<i>Diodon holocanthus</i> Linnaeus, 1758	S		P			C		
<i>Diodon hystrix</i> Linnaeus, 1758		P	P	P		U		
<i>Traganlichthys jaculiferus</i> (Cuvier, 1818)	S				S	C	South	
<b>Molidae</b>								
<i>Mola mola</i> (Linnaeus, 1758)					P	R		

## END NOTES

- Vouchers QM-I26457-58, from off Stradbroke I. in 180 m.
- Report from coastal area of Moreton Bay by Johnson (1999: 720) based on old QM specimens with imprecise locality data of 'Moreton Bay'.
- Reported by Ogilby (1916a).
- Specimen caught on drum line and washed up on beach, not retained.
- Several QM voucher specimens, reported by Kyne *et al.* (2005).
- Voucher QM-I38676, from off Cape Moreton.
- Reported as *M. antarcticus* Günther by Johnson (1999: 719).
- Reported as *H. microstoma* Bleeker in Johnson (1999: 719).
- Voucher QM-I38199.
- Reported by Kyne *et al.* (2005) from Moreton Bay.
- Two specimens, QM-I7976-77, removed from female taken at Tangalooma. Photograph also verified of 2.8 m specimen caught at Bulwer in 1996.
- Voucher QM-I14073.
- Voucher QM-I5166.

14. Vouchers QM-I14071-72.

15. Voucher QM-I14909.

16. One individual visually recorded at Flat Rock in 25 m depth on several occasions.

17. Not recorded in the region since the 1960s.

18. Photographs of *Rhynchobatus* examined for this survey appear to depict *R. laevis* rather than *R. australiae* Whitley (P. Last, pers. comm. 2009).

19. Voucher CSIRO H5768-01.

20. Forms seasonal aggregations near mouth of Southport Seaway.

21. Regarded by Last & Stevens (2009) as distinct from *P. sephen* (Forsskål).

22. *Aetobatus ocellatus* Kuhl has recently replaced *A. uarinari* (Euphrasen) as the valid name for the member of this genus occurring in the Indo-west Pacific (White *et al.* 2010).

23. Reported as *Manta birostris* (Donndorff) by Johnson (1999: 718). The latter was shown to be distinct from *M. alfredi* by Marshall *et al.* (2009).

24. Only record that of Last & Stevens (1994: 453).

25. See comments by Johnson (1999: 718).

26. Reported as *A. neoguinaica* Valenciennes in Johnson (1999: 720).

27. Vouchers QM-I36455, QM-I37620 and QM-I37697 from Flat Rock and QM-I38291 from Flinders Reef.
28. Voucher QM-I31149.
29. Vouchers QM-I36417 and QM-I37602.
30. Voucher QM-I38354 from Flinders Reef.
31. Reported as *G. sp.* in Johnson (1999: 721). Vouchers QM-I5141 and QM-I20041.
32. Voucher QM-I37603.
33. Voucher QM-I37618.
34. Reported as *G. boschii* (Bleeker) in Johnson (1999: 721).
35. Voucher QM-I18872.
36. Vouchers QM-I37680-81 from Shag Rock.
37. Collected off Cape Moreton in 97 m depth. Voucher QM-I38248.
38. Vouchers QM-I36454 and QM-I37695.
39. Voucher QM-I38468.
40. Voucher QM-I30222.
41. Reported as *Thyrsoidea macrura* (Bleeker) by Johnson (1999: 722).
42. New Australian record. Voucher QM-I33860, collected east of Moreton Island in 162 m.
43. Vouchers QM-I14147 and QM-I33877.
44. Reported as *O. episcopus* Castelnau by Johnson (1999: 721). The latter has a type locality of Moreton Bay and is reported as a junior synonym of *O. bonaparti* (Kaup) by McCosker (2002).
45. Vouchers QM-I14562 from Moreton Bay, and QM-I33347 and QM-I36517 from off Cape Moreton.
46. Voucher QM-I31100. Reported as *Muraenichthys cf. laticaudatus* (Ogilby) by Johnson (1999: 721).
47. Voucher QM-I30226.
48. Voucher QM-I21094.
49. *G. castlei* Karmovskaya & Paxton is probably also found in the area. Most of the diagnostic characters between these two species overlap and they are readily confused.
50. Voucher QM-I38247.
51. Voucher QM-I26680.
52. Reported as *Arius macrocephalus* Bleeker by Johnson (1999: 723).
53. Locally common at Southport Seaway, but rare or absent elsewhere in MBMP. Voucher QM-I30306.
54. Recorded by Paxton *et al.* (1989: 224) and Murdy & Ferraris (2006: 86), however there appear to be no voucher specimens from the area and these records may be based on misidentifications of *E. lepturus* (Günther).
55. Voucher QM-I30220 from Redcliffe.
56. Voucher QM-I30151.
57. This species has been confused with *S. undosquammis* (Richardson) in most prior reports (Inoue & Nakabo 2006).
58. Vouchers QM-I19158, QM-I26676 and QM-I38293.
59. In eastern Australia mostly referred to as *S. similis* McCulloch, 1921, a species doubtfully distinct from this one.
60. Known from MBMP by photographs, but several QM specimens to the near north of the area.
61. Voucher QM-I34262, trawled in 165 m east of Caloundra, identified by J. Paxton.
62. Beach washed specimens. Reported as *T. arawatae* Clarke by Johnson (1999: 725).
63. Beach washed specimens.
64. Voucher QM-I28228.
65. Vouchers QM-I36423 from Flat Rock, QM-I38273 from Wellington Point and QM-I38313 from Flinders Reef.
66. Vouchers QM-I20991 and QM-I34335 from off Stradbroke Is. in depths of 165-183 m.
67. Voucher QM-I37755.
68. Vouchers QM-I4462 and QM-I29810.
69. Voucher QM-I37621 includes two black morph adults accompanied by a pale juvenile.
70. Vouchers QM-I33334, QM-I33949 and QM-I34045, from off Stradbroke I. in 161-163 m. This population highly disjunct from the remainder, which is known only as far north as Bermagui, NSW (36°23'S).
71. Voucher QM-I33952. Species more frequently encountered in depths greater than 200 m.
72. Vouchers QM-I9697, QM-I9699, QM-I9704 and QM-I30959.
73. Voucher QM-I30250.
74. Reported as *A. ogilbyi* (Whitley) by Johnson (1999: 725).
75. Voucher AMS-IB1340.
76. Voucher QM-I30987.
77. Reported by Paxton *et al.* (1989: 343) and Hoese *et al.* (2006: 719). No vouchers.
78. Vouchers QM-I28281-82.
79. Occasionally seen leaping from the surface in oceanic waters.
80. Populations in MBMP appear to have steadily declined.
81. Reported (as *Optivus sp.*) from coastal area of Moreton Bay by Johnson (1999: 725) based on old QM specimens with imprecise locality data of 'Moreton Bay'.
82. Same comment as previous.
83. Vouchers QM-I28230 and QM-I31011.
84. Vouchers QM-I28290 and QM-I34241.
85. Voucher QM-I19771.
86. Voucher QM-I30285.
87. Vouchers QM-I37679 and QM-I37747 from Flat Rock, and QM-I31167 from Southport Seaway.
88. Reported as *H. planifrons* Peters by Johnson (1999: 726).



## Checklist of Moreton Bay Fishes

89. Reported as *H. whitei* Bleeker by Johnson (1999: 726).
90. Voucher QM-I31385.
91. Voucher QM-I36477.
92. Voucher QM-I30885.
93. Extends north to off Swain Reefs (22°09'S), QM-I18600.
94. Extends north to off Noosa (26°21'S), QM-I34211.
95. New record for Australian east coast, QM-I38264.
96. Vouchers QM-I36414 and QM-I37653 from Flat Rock, QM-I38345 from Flinders Reef and QM-I38730 from Southport Seaway.
97. Voucher QM-I27604.
98. Vouchers QM-I29254 from Tangalooma, QM-I38467 from Flinders Reef, QM-I36485 from Manta Ray Bommie and QM-I37652 from Shag Rock.
99. Voucher QM-I36504.
100. Vouchers QM-I20990 and QM-I26924.
101. Undescribed species determined by H. Motomura.
102. Voucher QM-I25732. Undescribed species determined by H. Motomura.
103. Listed as *S. scaber* (Ramsay & Ogilby) by Johnson (1999: 727).
104. Voucher QM-I37654.
105. Misidentified as *S. gibbosa* (Bloch & Schneider) by Johnson (1999: 727). Vouchers QM-I29869 from Moreton Bay, QM-I31136 from Southport Seaway and QM-I38359 from Flinders Reef.
106. Voucher QM-I36480.
107. Voucher QM-I36413.
108. Voucher QM-I36412.
109. Voucher QM-I34047.
110. Voucher QM-I34221 and QM-I34263.
111. Voucher AMS-IA.7380 from Southport.
112. Voucher QM-I38350 from Flinders Reef. Probable undescribed species, distinguished from *P. vespa* Ogilby by narrower interorbital ridges, smaller eye, and slightly higher pectoral-fin ray count.
113. Misidentified as *B. curtisensis* Whitley, 1933 by Johnson (1999: 728).
114. Listed as *C. sp.* by Johnson (1999: 728).
115. Voucher QM-I34184.
116. Voucher QM-I33277.
117. Imamura (2008) has determined that *P. arenarius* Ramsay & Ogilby is a junior synonym of *P. endrachtensis* Quoy & Gaimard. Furthermore, he found that the species with 3 or 4 dark bands to the caudal fin and a yellow blotch on the upper caudal lobe, previously misidentified as '*P. endrachtensis*' (eg Hoese *et al.* 2006: 941), should be referred to *P. westraliae* (Whitley).
118. Imamura (2008) has shown that *P. westraliae* (Whitley) is the correct name for the species recently misidentified as '*P. endrachtensis*' (eg Hoese *et al.* 2006: 941).
119. Voucher QM-I33260.
120. Voucher QM-I36456.
121. Vouchers QM-I29809 from Curtin Artificial Reef and QM-I38728 from Southport Seaway.
122. Voucher QM-I37642.
123. Voucher QM-I11521.
124. Known only by 2 specimens collected prior to 1917.
125. Voucher QM-I17827. Reports of *C. schlegelii* (Günther) from eastern Australia are referable to this species.
126. Extends north to Barwon Banks (26°40'S), QM-I17873.
127. Extends north to off Peregrin Beach (26°27'S), QM-I34148.
128. Voucher QM-I38666, trawled in 110 m off Cape Moreton.
129. Voucher QM-I37740.
130. Probable undescribed species, distinguished by colouration: head mostly reddish pink above and yellow below; two oblique pink stripes, extending from upper and lower margins of eye posteriorly to pectoral fin base; body red, infused with pink and yellow; dorsal fin mostly yellow, but with red spine tips and rays; caudal fin red and yellow, lobes with broad pink tips. Voucher QM-I38668, trawled in 110 m off Cape Moreton.
131. Voucher QM-I17619 from Flinders Reef. An adult also photographed at the South Wall, Southport Seaway.
132. Voucher QM-I12193.
133. Voucher QM-I19525.
134. Voucher QM-I5212.
135. Voucher QM-I20719.
136. Only record from coastal Moreton Bay is holotype of *E. viridipinnis* De Vis, 1884.
137. Voucher QM-I31307.
138. Voucher QM-I38667, trawled 110 m off Cape Moreton.
139. Voucher a paratype, QM-I10783.
140. Voucher QM-I31165.
141. Voucher QM-I29158.
142. Known only by the holotype of *P. wildii* Ogilby, 1908, QM-I784.
143. Voucher QM-I38338 from Flinders Reef.
144. Voucher QM-I29968.
145. Reported south to Moreton Bay by Hoese *et al.* (2006). Extends to Tweed River (28°10'S), QM-I31832.
146. Voucher QM-I31177.
147. Vouchers QM-I37643 and QM-I37708.
148. Voucher QM-I25721.
149. Voucher QM-I36436 and QM-I37640.
150. Voucher QM-I29873.
151. Voucher QM-I33257.
152. Misidentified as *A. fuscus* Quoy & Gaimard, 1824 by Johnson (1999: 732). Vouchers QM-I29745, QM-I30419 and QM-I31334.

153. Voucher QM-I37641.
154. Similar to *A. crassiceps* Garman, but differs in colouration and has more rounded head and snout, deeper body and stouter caudal peduncle. Voucher QM-I29156.
155. Confused with *F. brachygramma* Jenkins in previous reports from southern Qld.
156. Voucher QM-I29877 and QM-I30357.
157. Voucher QM-I37645, from Shag Rock.
158. Voucher QM-I29193.
159. Voucher QM-I25737.
160. New record for east coast of Australia. Vouchers QM-I30187, QM-I33164 and QM-I33167, from off Moreton and Stradbroke Is. in depths of 73–91 m.
161. Voucher QM-I29546.
162. Voucher QM-I22345.
163. Voucher QM-I34337.
164. Voucher QM-I16670.
165. Only record QM-I2158, collected in 1914.
166. Voucher QM-I31372.
167. Voucher QM-I30933.
168. Voucher QM-I26892.
169. Voucher QM-I3118.
170. Smith-Vaniz & Jelks (2006) report that the Qld and Lowe Howe I. population of *Pseudocaranx* may represent an undescribed species.
171. Voucher QM-I29835.
172. Reports from unpublished fisheries data extend range north to Wide Bay (25°50'S).
173. Voucher QM-I10609.
174. Reported by Johnson (1999: 735) as *Leiognathus decorus* (De Vis). Voucher QM-I25332.
175. Two specimens beach-washed on Stradbroke Island, QM-I9632 and QM-I36644.
176. Vouchers QM-I33202 and QM-I 34106.
177. Voucher QM-I21059.
178. Voucher QM-I17819.
179. Voucher QM-I28593.
180. Vouchers QM-I31102-04.
181. Reported from Moreton Bay by Ogilby (1916b).
182. Voucher QM-I26072.
183. Only record QM-I3071.
184. Voucher QM-I30321.
185. Vouchers QM-I15377-78.
186. *P. unicolor* (Macleay) may be a valid name for a closely related species occurring widely throughout the Indo-west Pacific outside of the Red Sea.
187. Voucher QM-I20171.
188. Voucher AMS-I18667-001.
189. Vouchers QM-I10589 and QM-I14777.
190. Voucher QM-I38083.
191. Listed as *P. sheridani* (Macleay) by Johnson 1999: 743). In 2007 numerous specimens up to 15 kg were noted in the Brisbane River after a fish kill. Voucher QM-I8042.
192. Reported as *J. novaehollandiae* (Steindachner) by Johnson (1999: 737).
193. Reported as *J. vogleri* (Bleeker) by Johnson (1999: 737).
194. Reported by Ogilby (1918). Voucher QM-I3173.
195. Photographs of a subadult at Wavebreak Island and a juvenile at the Southwest Wall.
196. Three subadults photographed at Wavebreak I.
197. Voucher QM-I31001.
198. Almost certainly confused with *U. fragula*, Richardson in previous reports on fishes of the area. Readily diagnosed from congeners by dorsal spine count of seven, with the first spine longest (versus dorsal spines eight, initial spine minute and inconspicuous) and low gill raker count (total rakers on first arch 22–23).
199. Extends south to at least Cook Island, NSW (28°10'S), based on photograph by I. Banks.
200. Voucher QM-I31012.
201. Vouchers QM-I30439 and QM-I31353 from Amity Point and QM-I31164 from Southport Seaway.
202. Voucher QM-I30438.
203. Voucher QM-I1015.
204. Vouchers QM-I8997 and QM-I13601 taken NE of Cape Moreton in 106–128 m.
205. Voucher QM-I10529.
206. Listed as *C. trifasciatus* Park by Johnson (1999: 739).
207. Photograph identified by G.R. Allen.
208. One visual record from Myora only.
209. Voucher QM-I19751.
210. Voucher QM-I1861.
211. Voucher QM-I10507.
212. Reported by Ogilby (1915). One visual record from Myora.
213. Voucher QM-I10591.
214. Voucher QM-I33351.
215. Voucher QM-I22660.
216. Vouchers QM-I36514 from Flinders Reef and QM-I8703 from Flat Rock.
217. Occasionally taken by anglers off the eastern beaches of Stradbroke and Moreton Islands.
218. Distributed widely throughout northern Australia, from at least Shark Bay, WA to Moreton Bay, Qld. Generally included in *Pelates*, but differs by a narrower body, tricuspid versus unicuspid teeth, and fewer gill rakers (total on first arch 21–24 versus 35–44). It is closely related to *H. octolineatus* Jenyns, 1840, from SA and southern WA. Voucher QM-I30884.



219. Most reports of *P. quadrilineatus* (Bloch) from MBMP are almost certainly based on misidentifications of *P. sexlineatus*. *P. quadrilineatus* is distinguished by longer dorsal-fin spines, a dark blotch in the spinous dorsal fin, a distinct (versus vague or absent) large black spot on the shoulder, and an additional half stripe on the sides, that extends through the shoulder spot. The latter has recently been confirmed from Moreton Bay (voucher QM-I38783), but appears to be rare south of Wide Bay.
220. Voucher QM-I38748.
221. Voucher QM-I36422.
222. Voucher QM-I12097. Extends north to Mudjimba Island (26° 37'S), QM-I8605.
223. Vouchers QM-I5145, QM-I5155-56, QM-I12073 and QM-I38682 from off Moreton Island.
224. First record for east coast of Australia. Voucher QM-I21141.
225. Visual records from off Smith Rock in 30 m.
226. Report from coastal area of Moreton Bay by Johnson (1999: 743) based on old QM specimens with imprecise locality data of 'Moreton Bay'.
227. Five males recorded; distinctive by dark anterior half of body contrasting with pale posterior half, small white patch above and behind eyes, falcate pelvic fins and strongly lunate caudal fin.
228. Voucher QM-I30430.
229. Voucher QM-I31015.
230. Visual records of one large specimen resident at Flat Rock in recent years.
231. Several recorded on baited underwater video near Flinders Reef and Flat Rock.
232. Voucher QM-I37658.
233. Both the common brown and yellow colour forms have been visually recorded.
234. Vouchers QM-I28134 and QM-I28595.
235. Voucher QM-I28106.
236. One visual record from Myora.
237. Two specimens from off Caloundra, QM-I4376-77.
238. Voucher QM-I37736.
239. Listed as *T. janseni* (Bleeker) by Johnson (1999: 745).
240. Voucher QM-I28612.
241. Voucher QM-I15998.
242. Spearfishing record for Qld, taken on 4.2.1996 (McDade 2008).
243. Voucher QM-I14978.
244. Spearfishing record for Qld, taken on 13.11.1994 (McDade 2008).
245. Spearfishing record for Australia, taken on 23.9.2005 (McDade 2008).
246. Common locally in freshwater and upper estuarine conditions, but also recorded at the mouth of the Brisbane River.
247. Previously recorded north to Moreton Bay, but extends to at least the wreck of the ex HMAS Brisbane, off Mooloolaba (26° 37'S).
248. Voucher QM-I38348 from Flinders Reef.
249. Voucher QM-I21664, from Caloundra Head.
250. Voucher QM-I8993.
251. Vouchers QM-I27601 and QM-I37617.
252. Voucher QM-I2547. Extends north to Murphy's Reef (26°40'S), QM-I31320.
253. Voucher QM-I37742.
254. Voucher QM-I37624.
255. Vouchers QM-I37623 from Shag Rock and QM-I29887 from Myora.
256. Easily confused with *P. coelestis* and *P. australis* in visual surveys.
257. Voucher QM-I25718.
258. Voucher holotype, QM-I33274 from off Cape Moreton in 86 m.
259. Entered as *Parapercis* sp. 3 of Johnson in CSIRO Codes for Australian Aquatic Biota.
260. Uncommon in MBMP, but commonly trawled in depths of 98–132 m to the near north.
261. Voucher QM-I19402.
262. Vouchers QM-I30958 and QM-I33199.
263. Probable undescribed species determined by M. Gomon (pers com.). Vouchers QM-I9716-17, from off Cape Moreton in 118 m.
264. Voucher QM-I37669 from Shag Rock.
265. Voucher QM-I38362 from Flinders Reef.
266. Listed as *E. hemimelas* (Kner & Steindachner) by Johnson (1999: 747).
267. Vouchers QM-I29165 and QM-I29245 from Tangalooma Wrecks.
268. Vouchers QM-I38311 and QM-I38361 from Flinders Reef.
269. Identified as *H.* sp 7 of Fricke (1997).
270. Known in the area only by QM-I29671 from Redcliffe, collected in early 1900s.
271. Reported as *N. thomasi* Whitley by Johnson (1999: 747).
272. Vouchers QM-I37668 from Shag Rock and QM-I37712 from Manta Ray Bommie.
273. Voucher QM-I29753, from Amity Point.
274. Vouchers QM-I7514 and QM-I10646, from Southport.
275. Determined as an undescribed species by D. Hoese. Voucher QM-I34404.
276. Voucher QM-I38469.
277. Voucher QM-I38466.
278. Voucher QM-I36434, from Flat Rock.
279. Voucher QM-I37703, from Manta Ray Bommie.
280. Voucher QM-I37664, from Shag Rock.



281. Voucher QM-I31301, from Frenchmans Bay, Point Lookout.
282. Voucher QM-I25243, from Brisbane River mouth.
283. Compares closely with *C. australis* from Western Australia. Vouchers QM-I33041 and QM-I33163, from off Cape Moreton in 73–75 m.
284. Voucher QM-I38416 from South Wall in 15 m. Also photographed at Wavebreak Island.
285. Vouchers QM-I33075 and QM-I34043, from depths of 98–163 m.
286. Vouchers QM-I31027, QM-I31093 and QM-I31190 identified by H. Larson.
287. Voucher QM-I31370.
288. Confirmed from a photograph taken in an estuarine creek on North Stradbroke Island in January 2010.
289. Vouchers QM-I27039 and QM-I31097.
290. Reported from Moreton Bay by Young & Wadley (1979) and Hoese *et al.* (2006:1617). Occurs north to Maroochy River (26°37'S), QM-I38587.
291. Voucher QM-I30961 from Tangalooma Point.
292. Identified as *A. sp. 4* by H. Larson. Five specimen lots in QM.
293. Voucher QM-I37637 from Shag Rock.
294. Undescribed species referred to as *C. sp. 6* by D.F. Hoese.
295. Vouchers QM-I13628, QM-I14198 and QM-I29715, trawled in Moreton Bay.
296. Reported as *Brachyamblyopus rubristriata* (Saville-Kent) by Johnson (1999: 749). Distinguished from *C. urolepis* by more elongate body and total lack of scales on head and body. Common in estuaries of Moreton Bay. Fifteen lots in QM.
297. Vouchers QM-I8152, QM-I26356 and QM-I35775.
298. Vouchers QM-I31278-79 identified by H. Larson. Reported as *Calamiana sp.* by Johnson (1999: 748).
299. Vouchers QM-I31132 from Southport Seaway, QM-I38340 from Flinders Reef and QM-I36438 from Flat Rock. According to Greenfield & Randall (2010) records of *E. albolineata* Jewett & Lachner from Australian waters are referable to *E. guttata*.
300. Vouchers QM-I36475, QM-I37678 and QM-I37750 from Flat Rock.
301. Vouchers QM-I36437 and QM-I37751 from Flat Rock and QM-I38356 from Flinders Reef.
302. Vouchers QM-I16708, QM-I17913, QM-I29226 and QM-I30165, identified by D.F. Hoese.
303. Vouchers QM-I37662 from Shag Rock and QM-I37744 from Manta Ray Bommie.
304. Reported as *G. sp.* by Johnson (1999: 749).
305. Voucher QM-I37671 from Shag Rock.
306. Voucher QM-I37662 from Shag Rock.
307. Vouchers QM-I29150 and QM-I29748. Extends south to Tweed River mouth, NSW, QM-I31829.
308. Voucher QM-I38747.
309. Three records, all obtained in May 2010. QM-I38681 and QM-I38706, trawled off Redcliffe, and photographs of a specimen trawled in the Broadwater, between Woogoompah and South Stradbroke Is.
310. Nine lots trawled from Moreton Bay in QM.
311. Only records QM-I2738, collected in 1895, and report by Castelnau (1878).
312. Voucher QM-I38341 from Flinders Reef.
313. Voucher QM-I29805, from Curtin Artificial Reef.
314. Voucher QM-I37760, from Shag Rock.
315. Voucher QM-I30695.
316. Voucher AMS-I17125-001, also visual record of a small school at Tangalooma Wrecks in January 2009.
317. Voucher QM-I29234 from Tangalooma Wrecks.
318. Known in the area only by one lot, QM-I2614, collected in 1916.
319. Voucher QM-I11610.
320. Voucher QM-I14976, from Flinders Reef.
321. Vouchers QM-I28609-10, from Flinders Reef.
322. Vouchers QM-I3169 and QM-I6692.
323. Vouchers QM-I29792, QM-I31314 and QM-I30372.
324. Voucher QM-I27620, from Flinders Reef.
325. Voucher QM-I31169.
326. Vouchers QM-I10540 and QM-I11429.
327. Voucher QM-I15375, from Flinders Reef.
328. Vouchers QM-I30831, QM-I30934 and QM-I32638, from Flat Rock.
329. Vouchers QM-I20048 and QM-I20712, from Flinders Reef.
330. Voucher QM-I18478, from Flinders Reef.
331. Voucher QM-I22237, from Flinders Reef.
332. Voucher QM-I37227, from Cape Moreton.
333. Reported by Ogilby (1912), on the basis of six fish market specimens from off Moreton Bay. Voucher QM-I171.
334. Voucher QM-I28196, from Flinders Reef.
335. Vouchers QM-I26378 and QM-I38246.
336. Specimen caught by handline in 140 m off Cape Moreton in May 2008.
337. Reported as *C. squamiceps* (Lloyd) by Johnson (1999: 752).
338. New record for Australia based on three lots from off Cape Moreton in depths of 104–148 m, QM-I33027, QM-I34230 and QM-I34339.
339. Voucher QM-I37463, from off Moreton Island.
340. Known in coastal Moreton Bay area only by the holotype, QM-I1557. More regularly trawled in offshore waters.
341. Voucher QM-I32713 from off Cape Moreton.
342. Known in the area only by the holotype, QM-I1569.
343. Voucher QM-I37610, from Shag Rock.

344. Voucher QM-I38784, from off Stradbroke Island.  
 345. Voucher QM-I38266, from off Caloundra in 120 m.  
 346. Reported as *Aseraggodes* sp. by Johnson (1999: 752). Voucher QM-I29807, from Curtin Artificial Reef.  
 347. Reported as *Dexillichthys* sp. by Johnson (1999: 752). Vouchers QM-I11440 and QM-I26926.  
 348. Vouchers QM-I12355, QM-I12392 and QM-I12550.  
 349. Reported by Stephenson & Burgess (1980).  
 350. Voucher QM-I30210.  
 351. Identified as *C. sp.1 'punctate'* by T. Munroe in 2007. Vouchers QM-I14491 and QM-I30161.  
 352. Identified as *C. sp. 'cf sibogae'* by T. Munroe in 2007. Voucher QM-I36491.  
 353. Identified as *C. sp. 'long snout'* by T. Munroe in 2007. Vouchers QM-I29517-19.  
 354. Identified as *C. sp. 4* by T. Munroe in 2007. Voucher QM-I34197.  
 355. Ten lots in QM. Voucher QM-I26383.  
 356. Most recently regarded as a junior synonym of *P. bilineata* (Bloch), it is here treated as a distinct species based on differences in branching of the labial papillae, number of lateral lines, and colouration. Reported as *P. sp.* by Johnson (1999: 753).  
 357. Identified from MBMP area by photographs, but several QM specimens to the near north of the area.  
 358. Reports of *Triacanthus biaculeatus* (Bloch) by Stephenson & Burgess (1980) and Johnson (1999: 753) were almost certainly based on misidentifications of this species.  
 359. Known only by QM-I303, collected in 1912.  
 360. Vouchers QM-I19183, QM-I26593 and QM-I31000, from Flinders Reef.  
 361. Seventeen lots from MBMP area in QM.  
 362. Voucher QM-I10788.  
 363. Vouchers QM-I10749 from Dunwich and QM-I30366 from Myora.  
 364. Extends north to Noosa (26°21'S), QM-I12666.  
 365. Voucher QM-I12382.  
 366. Voucher QM-I11427.  
 367. One specimen photographed at the South Wall.  
 368. Recently distinguished from *C. coronata* (Vaillant & Sauvage) by Randall *et al.* (2008).  
 369. Often confused with *L. spadiceus* (Richardson), which appears to be distributed in more northern waters of Queensland.  
 370. Vouchers QM-I10876, QM-I10882 and QM-I38750.  
 371. Known in area only by QM-I344, collected in 1912.

## DISCUSSION

The total of 1,190 species listed here for MBMP is 440 (58.7%) higher than that recorded by Johnson (1999) for Moreton Bay, mainly due to the

inclusion of species from the more diverse off-shore reefs around Flinders Reef and Flat Rock, and species from greater depths in offshore waters. The species total listed here for coastal Moreton Bay is almost identical to the number recorded by Johnson (1999), however the composition of the current list differs through the inclusion of subsequent new records, and exclusion of doubtful records, misidentifications and records exclusive to the Southport Seaway. The area from Comboyuro Point to Cape Moreton and west to Caloundra Head and Skirmish Point added minimally to the number of species recorded from coastal Moreton Bay. Only three species were exclusive to the additional area. *Thysanophrys cirronasus*, *Carangoides oblongus* and *Chysiptera glauca*, all from Caloundra Head, were each recorded by a single lot. Within MBMP, 238 species were exclusive to the area defined as coastal Moreton Bay.

The following records, regarded as doubtful in Johnson (1999), have since been determined as invalid and are here excluded from MBMP:

*Heterodontus portusjacksoni* (Meyer) – no vouchers; probable misidentification of *H. galeatus* in litt. (Saville-Kent 1897: 193).

*Galeorhinus galeus* (Linnaeus) – no extant vouchers; probable misidentification.

*Carcharhinus melanopterus* (Quoy & Gaimard) – no vouchers; probable misidentification in litt. (Ogilby 1908b; 1916a).

*Cymbacephalus stageri* (Castelnau) – no vouchers; not verified from south of the Great Barrier Reef.

*Inegocia harrisi* (McCulloch) – no vouchers; misidentification of *I. japonica*.

*Plesiops corallicola* Bleeker – single voucher, but locality data probably in error.

*Amniataba candavittata* (Richardson) – no extant vouchers; locality in litt. probably in error (Ogilby & McCulloch 1916).

*Acreichthys tomentosus* (Linnaeus) – single voucher, but locality data probably in error.

Other species recorded by Johnson (1999), but removed from this list include:

*Himantura granulata* (Macleay) – no vouchers; not verified south of Great Barrier Reef; locality of Brisbane in litt. (Last & Stevens 1994: 402) in error.

*Scorpaenopsis gibbosa* (Bloch & Schneider) – misidentification of *S. diabolus*.



Table 2. Species counts by location for the fifteen most speciose families in Moreton Bay Marine Park (MBMP). Abbreviations: Flinders = Flinders Reef area, Flat R. = Flat Rock area, Southport = Southport Seaway, Offshore = Offshore in 40–200 m.

Family	Coastal Bay spp.	Flinders spp.	Flat R. spp.	Southport spp.	Offshore spp.	MBMP		
						genera	spp.	% total
Labridae	44	60	48	35	5	32	81	6.8
Gobiidae	49	10	15	16	1	42	64	5.4
Pomacentridae	38	39	35	27	2	13	53	4.5
Serranidae	20	30	17	17	10	15	47	3.9
Carangidae	35	21	9	19	6	20	43	3.6
Chaetodontidae	28	27	23	19	2	9	37	3.1
Apogonidae	20	15	13	15	1	8	34	2.9
Tetraodontidae	21	10	10	12	10	9	31	2.6
Lutjanidae	16	20	12	9	6	8	27	2.3
Acanthuridae	10	23	18	15	–	6	26	2.2
Blennidae	14	8	13	10	–	14	25	2.1
Monacanthidae	15	12	12	11	8	17	24	2.0
Scorpaenidae	12	12	17	14	5	9	23	1.9
Muraenidae	12	10	10	8	1	4	23	1.9
Syngnathidae	13	1	5	7	3	15	20	1.7
<b>Total</b>	<b>347</b>	<b>298</b>	<b>257</b>	<b>234</b>	<b>60</b>	<b>221</b>	<b>558</b>	<b>46.9</b>

*Odax cyanomelas* (Richardson) – probable misidentification in litt. (Ogilby 1908a).

*Chromis viridis* (Cuvier) – misidentification of old QM specimen of *C. atripectoralis*.

*Dischistodus fasciatus* (Cuvier) – old specimen in poor condition; probable misidentification.

*Peronedys anguillaris* Steindachner – locality of single voucher erroneous.

*Petroscirtes variabilis* Cantor – misidentification of *P. lupus*.

*Triacanthus biaculeatus* (Bloch) – misidentification of single juvenile AMS specimen of *Tripodichthys angustifrons*.

Four species usually found in depths greater than 40 m were recorded by Johnson (1999) based only on old QM specimens with imprecise locality data of 'Moreton Bay' or 'Off Moreton Bay'. In this study *Heterodontus galeatus*, *Centroberyx affinis*, *Optivus agastos* and *Bodianus unimaculatus* are removed from coastal Moreton Bay, but listed for the deeper offshore zone.

Species composition of the Flinders Reef area (477 spp.) varies considerably from that of the Flat Rock area (420 spp.) (Table 2). Within the

MBMP, 95 species were recorded only around Flinders Reef, while 50 were exclusive to the Flat Rock area. Variation in the occurrence of the species of some families may be partially explained by differing emphasis of sampling methodologies employed between the two areas. Historically, collectors that have lodged specimens at the QM have more intensively sampled Flinders Reef by hook and line and spear, hence groups most susceptible to these methods, such as serranids, carangids and lutjanids, may be disproportionately well documented compared to Flat Rock. However, it is to be expected that the more extensive and complex coral communities at Flinders Reef would support a greater diversity of some groups, especially labrid, scarid and acanthurid fishes. Reefs around Flat Rock appear to hold slightly more diverse communities of some other groups, including scorpaenid, blennid and gobiid fishes.

Southport Seaway is clearly the smallest of the five areas treated here, and has the least complex habitat composition. Despite this, 404 species were recorded, 23 of which were not recorded elsewhere in the MBMP. The relatively high diversity of species in this area is probably due



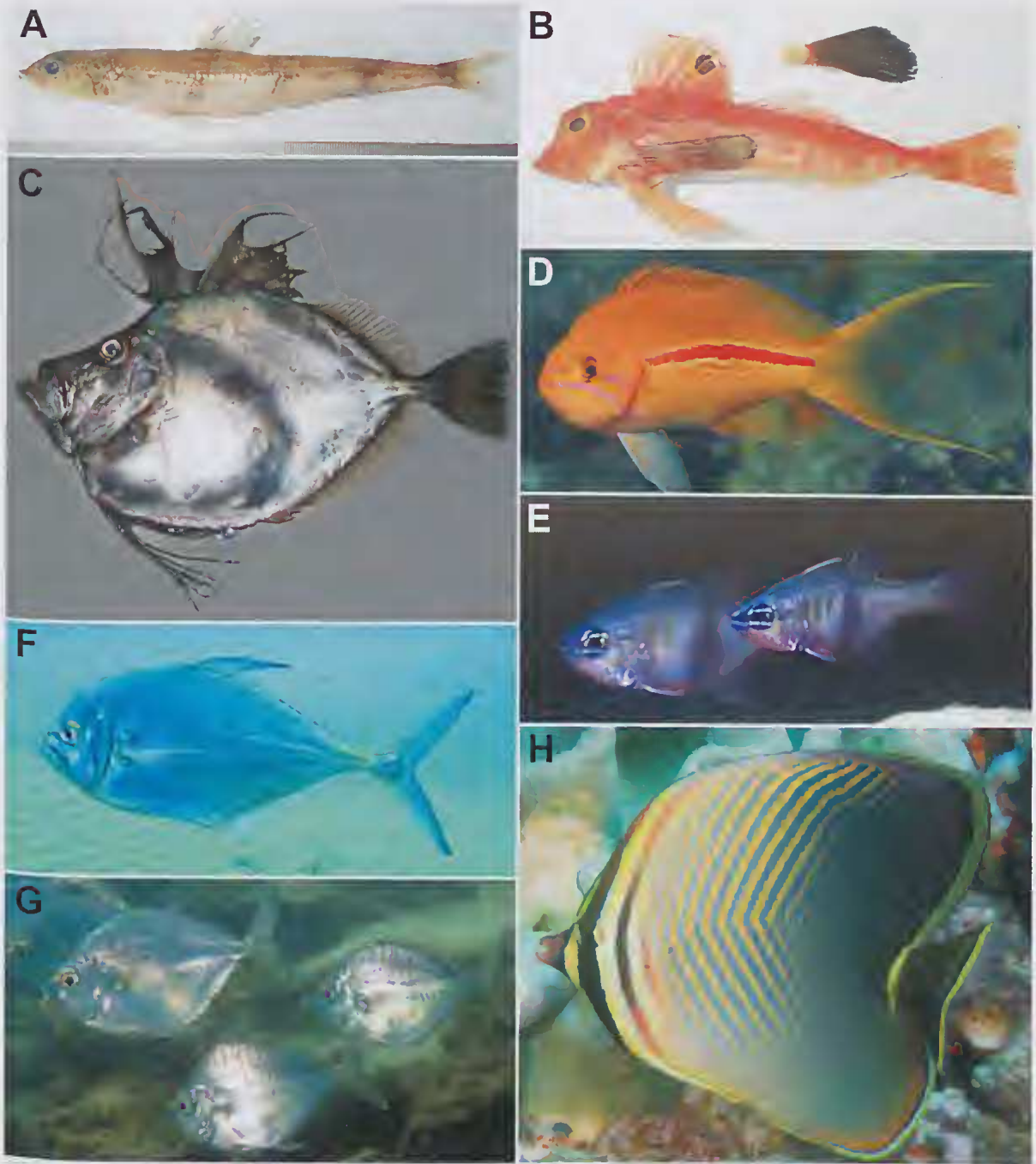


FIG. 4. A. *Synodus macrops* from off Cape Moreton (southern range extension). B. *Lepidotrigla papilio* from off Cape Moreton (northern range extension). C. *Zenopsis nebulosus* from off Cape Moreton (northern range extension). D. *Pseudanthias fasciata* from Hutchinson Shoal (southern range extension). E. *Archamia leai* from Flinders Reef (southern range extension). F. *Ulua mentalis* from Southport Seaway (southern range extension). G. *Leiognathus fasciatus* from Southport Seaway (southern range extension). H. *Chaetodon baronessa* from Flinders Reef (southern range extension). Photos: A-C by D. Roy; D & F-H by I. Banks; E by J. Jensen.



FIG. 5. A. *Chaetodon ocellicaudus* from Southport Seaway (southern range extension). B. *Paracirrhites arcatus* from Hutchinson Shoal (southern range extension). C & D. *Acanupses femininus* (male & female pair) from Flinders Reef (northern range extension). E. *Gomphosus varius* from Flinders Reef (southern range extension). F. *Halichoeres melanurus* from Flinders Reef (southern range extension). G. *Halichoeres trimaculatus* from Southport Seaway (southern range extension). H. *Chlorurus sordidus* from Flinders Reef (southern range extension). I. *Amblyglyphidodon curacao* from Flinders Reef (southern range extension). J. *Amphiprion latezonatus* from Flat Rock. All photos I. Banks.



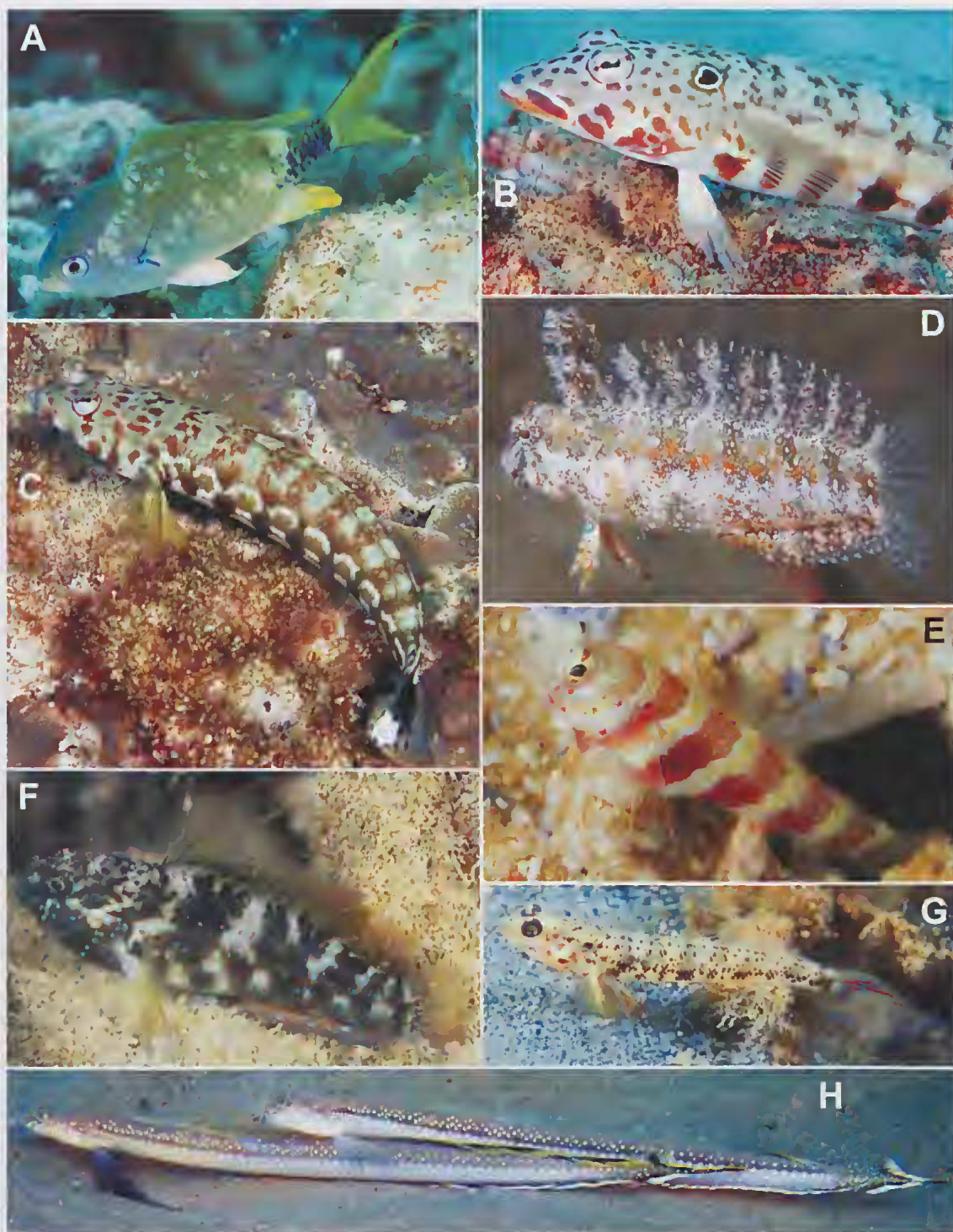


FIG. 6. A. *Chromis atripectoralis* from Flinders Reef (southern range extension). B. *Parapercis clathrata* from Flinders Reef (southern range extension). C. *Parapercis millepunctata* from Flinders Reef (southern range extension). D. *Petrosirtes nigratus* from Southport Seaway (southern range extension). E. *Amblyeleotris wheeleri* from Flinders Reef (southern range extension). F. *Asterropteryx semipunctatus* from Southport Seaway. G. *Vanderhorstia ornatissima* from Southport Seaway (southern range extension). H. *Trichonotus setiger* from Southport Seaway (southern range extension). All photos I. Banks.



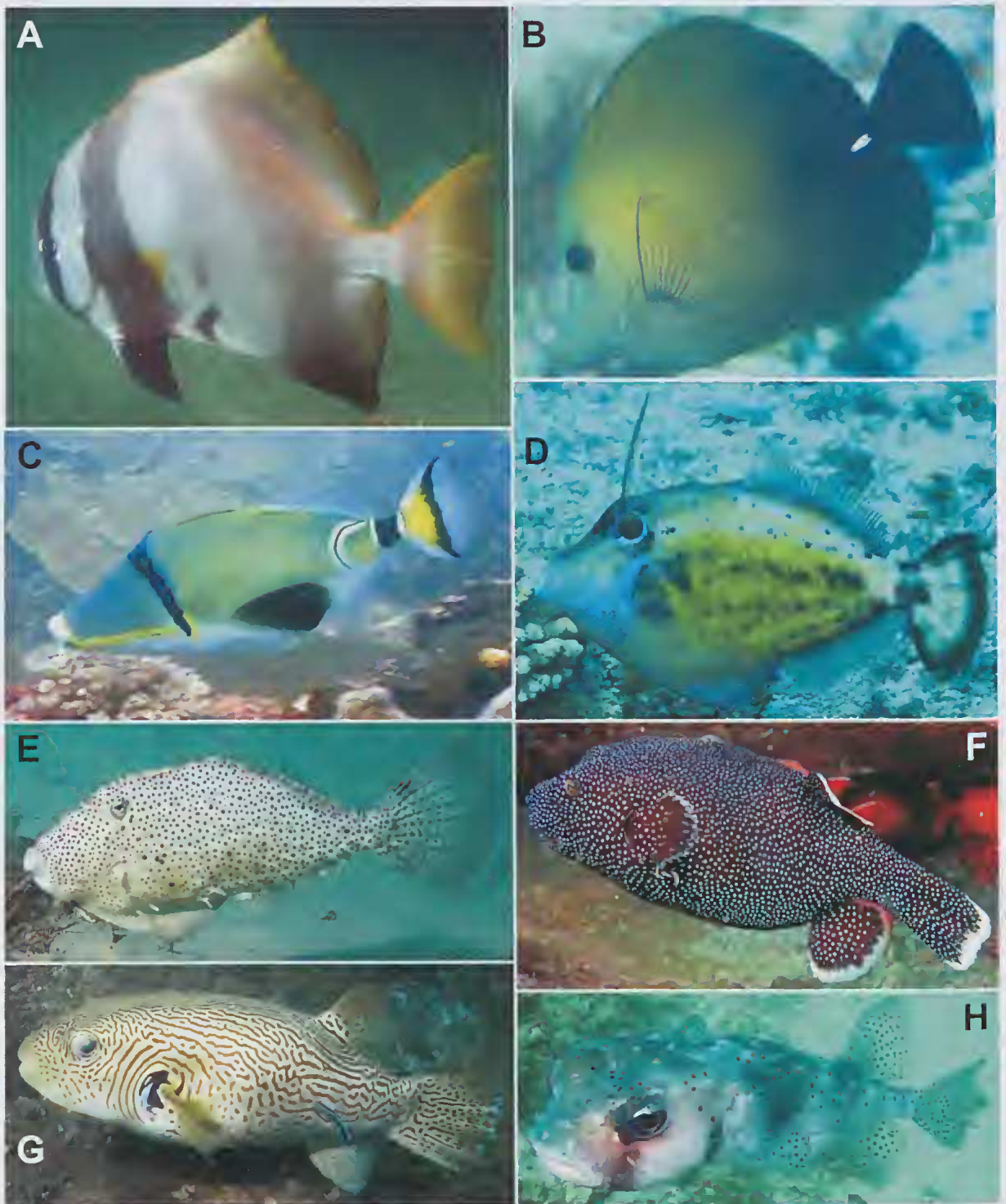


FIG. 7. A. *Platax batavianus* from Tangalooma Wrecks (southern range extension). B. *Zebrasoma scopas* from Flinders Reef (southern range extension). C. *Rhinecanthus lunula* from Flinders Reef. D. *Cantherhines fronticinctus* from Flinders Reef. E. *Pseudomonacanthus peroni* from Southport Seaway (southern range extension). F. *Arothron meleagris* from Flat Rock (southern range extension). G. *Arothron reticularis* from Southport Seaway. H. *Chilomycterus reticulatus* from Shag Rock. Photos: A, B, D-H by I. Banks; C by J. Jensen.

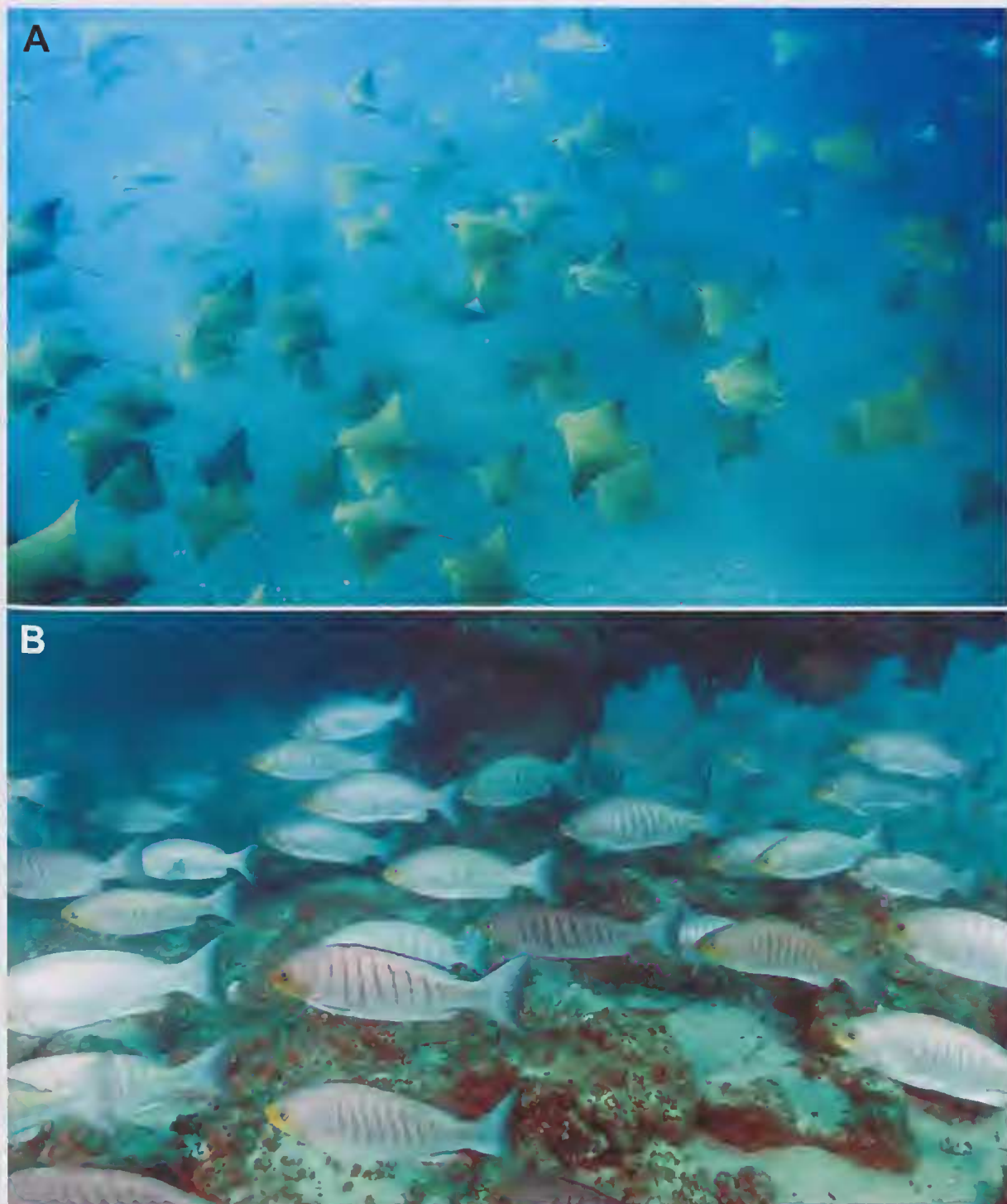


FIG. 8. A. *Rhinoptera neglecta* aggregating at the mouth of the Southport Seaway in May 2007. B. *Girella tricuspidata* schooling around the cross-channel sandpipe at the Southport Seaway. Photos: I. Banks.



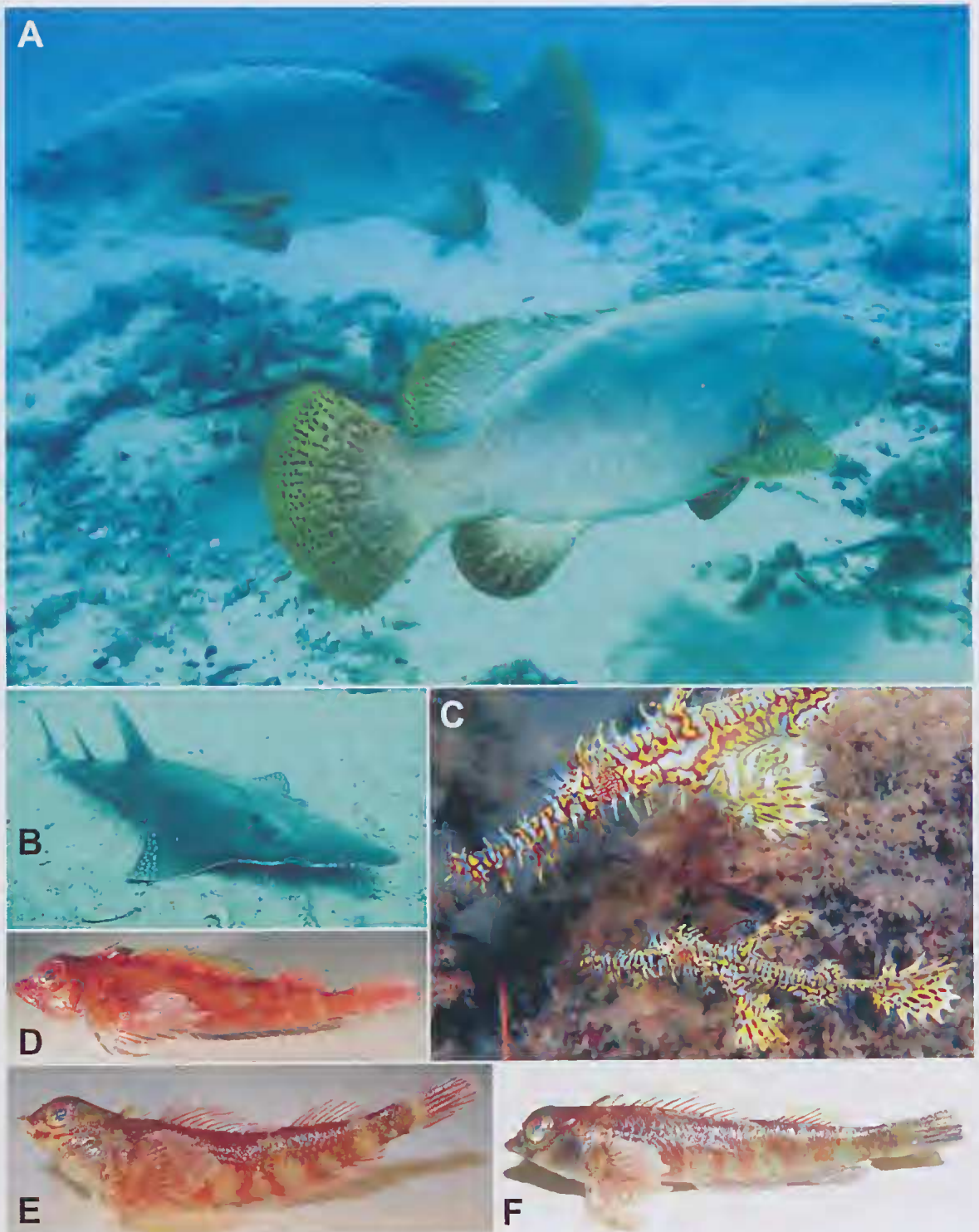


FIG. 9. A. Several of a group of eight large *Epinephelus lanceolatus* at the north-east wall, Southport Seaway in March 2008. B. One of a group of twelve *Rhynchobatus laevis* at the Southport Seaway entrance in November 2008. C. Pair of *Solenostomus paradoxus* at the Southport Seaway, in December 2006. D. *Helcogramma* sp. 1, male, QM-I38310 from Flinders Reef. E. *Enneapterygius* sp. 1, female, QM-I38311 from Flinders Reef. F. *Enneapterygius* sp. 1, male, QM-I38311 from Flinders Reef. Photos A–C by I. Banks.



to a combination of good water quality, low turbidity and nutrient rich outflow from the Nerang River estuarine system, regular inflow and flushing from clean oceanic water, and extensive boulder walls, which together provide an environment favoured by a wide range of fishes. Observations made during this study (many logged on video), indicate that this area hosts regular seasonal aggregations of a number of species that are not commonly recorded in other parts of MBMP, or more widely in southern Queensland. Whitespotted Guitarfish (*Rhynchobatus laevis*) (Fig. 9B), whiprays (*Himantura fai* and *H. uarnak*) cownose rays (*Rhinoptera neglecta*) (Fig. 8A), ghost pipefishes (*Solenostomus cyanopterus* and *S. paradoxus*) (Fig. 9C), pipefishes (*Stigmatopora nigra* and *Trachyrhamphus bicoarctatus*), seahorses (*Hippocampus procerus*), and Queensland Groper (*Epinephelus lanceolatus*) (Fig. 9A) are regularly seen in such aggregations. While sightings of two or three individuals of Queensland Groper in the seaway are commonplace, on a number of occasions up to eight separate individuals of 1.2–1.6 m have been recorded at one time, especially in July, when large shoals of luderick (*Girella tricuspidata*) (Fig. 8B) form near the mouth of the seaway. Aggregations of various other more common species, such as Bigeye Trevally (*Caranx sexfasciatus*) and Mulloway (*Argyrosomus japonicus*) were by far the largest observed in the MBMP. Spawning in Dusky Flathead (*Platycephalus fuscus*), usually involving single females of 60–90 cm accompanied by numerous much smaller males, has been observed and filmed here on a regular basis. Whitespotted Eagle Rays (*Aetobatus narinari*) and other large fishes regularly move with the flood tide to particular ‘cleaning stations’ in the seaway to have ectoparasites removed by the Common Cleanerfish (*Labroides dimidiatus*).

The offshore zone in depths of 40–200 m was not surprisingly the least diverse of the five areas under study, with 297 species recorded. However, all sampling was undertaken by hook and line or bottom trawling, so fishes closely associated with deep reefs are likely under-represented in the results. Some baited underwater video footage was viewed from reef sites off Moreton and Stradbroke Islands, however depth considerations discounted underwater visual and photographic surveys

and the ability to collect small and cryptic reef fishes using ichthyocides on SCUBA gear, as in the other areas. Trawling effort in the 160–200 m depth range was not as extensive as it was in the 40–160 m depth range, due to limitations of gear and boat time. Capacity to document species diversity across all habitats of this area was thereby more limited than in other areas.

New records for Australia include *Dysomma anguillare*, *Apogon seminigracaudus* and *Arnoglossus dalgleishi*.

New records for the east coast of Australia include *Dactyloptena peterseni*, *Pristigenys nipponia*, *Bodianus bilunulatus*, and *Spinicapitichthys draconis*. Material identified here as *Calliurichthys* c.f. *australis* appears to be distinct from *C. australis* (Fricke), which is currently recognised only from Western Australia.

Two species known only from Flinders Reef appear to be undescribed: *Enneapterygius* sp. 1 (Fig. 9E–F) and *Paracentropogon* sp. 1. The genus *Enneapterygius* is highly speciose and its species often occur in aggregations. Additional research would be required to more fully elucidate the range and relationships of *Enneapterygius* sp. 1. In contrast, the genus *Paracentropogon* as currently recognised contains only three or four species, with only a single Australian representative. The habitat where specimens of *Paracentropogon* sp. 1 was collected (rock pools on tidal reef flat, exposed to extreme wave action from ocean swells) is quite different to that where the other species of *Paracentropogon* are usually found.

Four terminal males of an unknown, possibly undescribed species of *Bodianus* (see brief diagnosis in endnote no. 227) were recorded from sites near Henderson Rock, off Moreton Island (approx. 27°08'S, 153°29'E) in 27 and 28 m, and Flinders Reef in 10 and 24 m, from baited underwater video footage. The Henderson Rock sites included thick beds of kelp, *Ecklonia radiata*. In this area, *E. radiata* is at the northern limit of its known range on the east coast of Australia. A still image of a fifth terminal male was obtained near the mooring buoys at Flinders Reef, on sparse coral and rubble bottom at a depth of 10 m. Attempts to collect a specimen, or to find and correctly associate the female colour form of this species to the male, have so far been unsuccessful.

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